

2087

PROGRAMMED ARITHMETIC WORKBOOK

ANSWER BOOK ONE



K.A.Hesse





Programmed Arithmetic Workbook

One

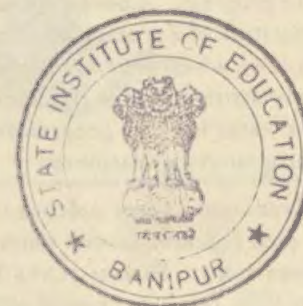
Edition with answers

2087
~~5161~~

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NOTES FOR THE TEACHER

Success, even if it is only limited, encourages in children that sense of achievement which is the key to progress. Conversely, nothing dulls their enthusiasm more quickly than needless repetition of a process which has already been mastered.

It is this principle on which the *Programmed Arithmetic Workbooks* have been planned. After any necessary assistance from the teacher in the initial stages each pupil, according to his ability, creates his own programme in mastering the number combinations. This is how the programming is achieved:

After a few introductory pages practice is provided with a small group of number combinations, each repeated several times, and the pupils are then presented with a test line of seven sums. Success at the first attempt is followed by directions to proceed to the next test line; partial success is followed by directions leading to further practice and thence to an alternative test line. (After the first, each subsequent test line includes one sum from the previous set, so that only six new number combinations are tested at any one time.)

The sequence of practice, test, correction, practice and re-test, is interrupted at intervals by groups of revision sums. All pupils, irrespective of their ability, are led by the instructions to work on these groups. It is suggested that the brighter pupils be encouraged to use these revision groups to "work against the clock" and so improve their speed with accuracy.

How many?

A



and



$$2 + 1 = 3$$

$$2 + 1 = 3$$

$$1 + 1 = 2$$

$$3 + 1 = 4$$

$$4 + 1 = 5$$

$$5 + 1 = 6$$

$$6 + 1 = 7$$

B



and



$$3 + 2 = 5$$

$$3 + 2 = 5$$

$$1 + 2 = 3$$

$$2 + 2 = 4$$

$$4 + 2 = 6$$

$$5 + 2 = 7$$

$$6 + 2 = 8$$

C



and



$$3 + 3 = 6$$

$$3 + 3 = 6$$

$$1 + 3 = 4$$

$$2 + 3 = 5$$

$$4 + 3 = 7$$

$$5 + 3 = 8$$

$$6 + 3 = 9$$

D



and



$$3 + 4 = 7$$

$$3 + 4 = 7$$

$$2 + 4 = 6$$

$$1 + 4 = 5$$

$$4 + 4 = 8$$

$$5 + 4 = 9$$

$$6 + 4 = 10$$

go to page 2, A

2

Add +

A



$$2 + 1 = 3$$



$$1 + 2 = 3$$

B

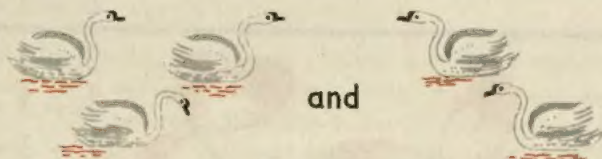


$$3 + 1 = 4$$

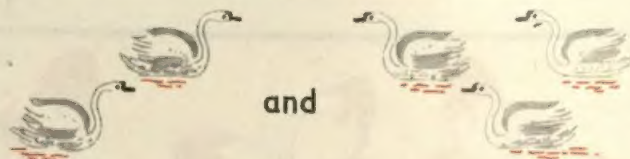


$$1 + 3 = 4$$

C

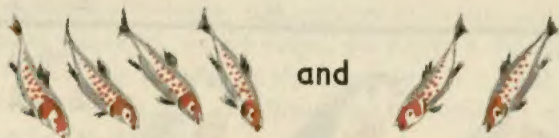


$$3 + 2 = 5$$

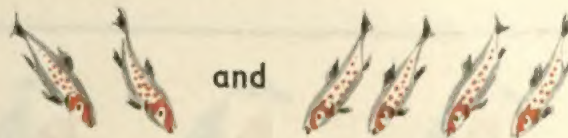


$$2 + 3 = 5$$

D



$$4 + 2 = 6$$



$$2 + 4 = 6$$

E

$$1 + 1 = 2$$

$$2 + 1 = 3$$

$$1 + 2 = 3$$

$$3 + 1 = 4$$

$$1 + 3 = 4$$

$$3 + 2 = 5$$

$$2 + 3 = 5$$

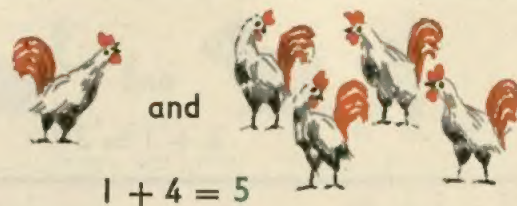
$$2 + 2 = 4$$

$$4 + 2 = 6$$

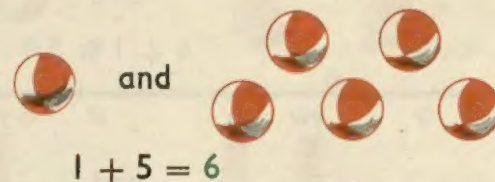
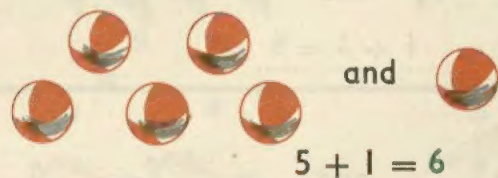
$$2 + 4 = 6$$

go to page 3, A

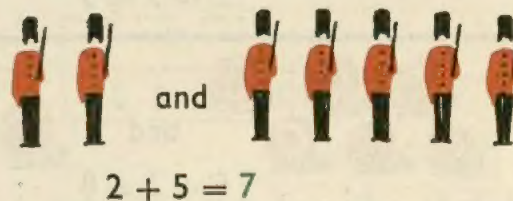
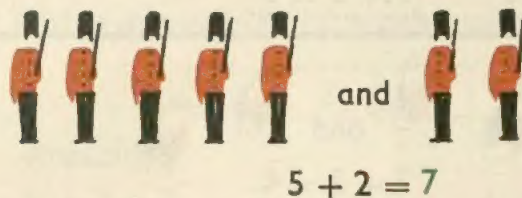
A



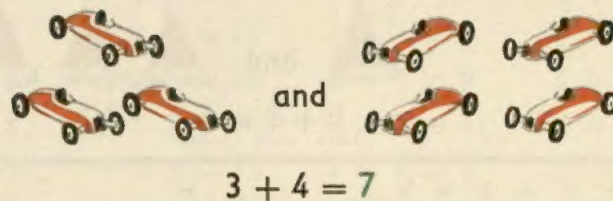
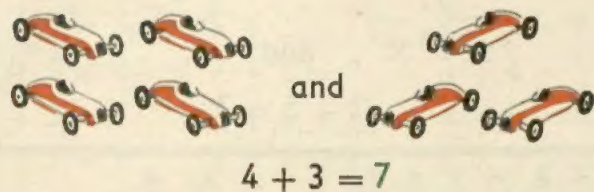
B



C



D



E

2 + 3 = 5

5 + 1 = 6

1 + 5 = 6

5 + 2 = 7

2 + 5 = 7

4 + 1 = 5

1 + 4 = 5

3 + 3 = 6

4 + 3 = 7

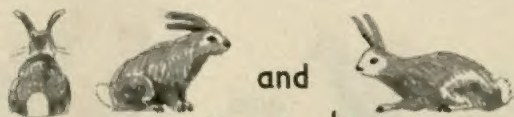
3 + 4 = 7

go to page 4, A

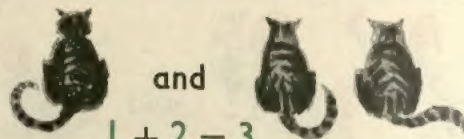
4

Make your own sums

A



and
 $2 + 1 = 3$

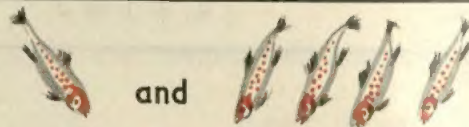


and
 $1 + 2 = 3$

B

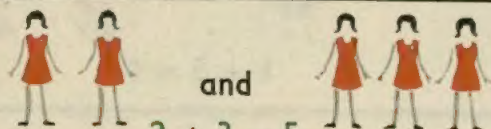


and
 $4 + 1 = 5$

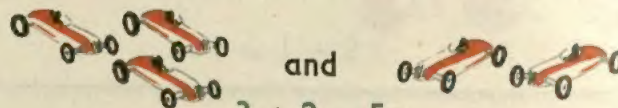


and
 $1 + 4 = 5$

C



and
 $2 + 3 = 5$

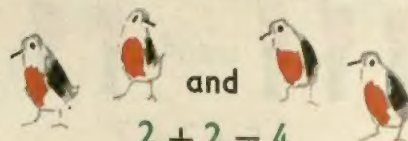


and
 $3 + 2 = 5$

D



and
 $6 + 2 = 8$

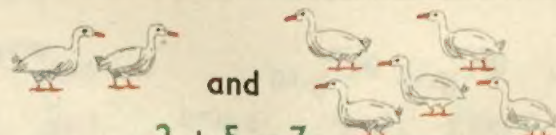


and
 $2 + 2 = 4$

E



and
 $1 + 3 = 4$



and
 $2 + 5 = 7$

F



and
 $7 + 1 = 8$



and
 $6 + 2 = 8$

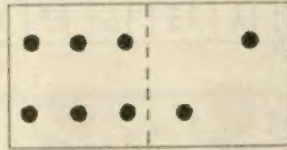
go to page 5, A

Make your own sums

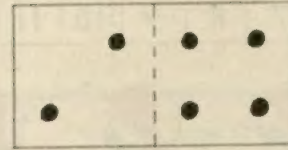
A



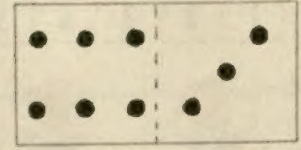
$$\begin{array}{r} 5 + 3 = 8 \\ \text{.....} \end{array}$$



$$\begin{array}{r} 6 + 2 = 8 \\ \text{.....} \end{array}$$

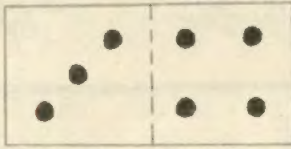


$$\begin{array}{r} 2 + 4 = 6 \\ \text{.....} \end{array}$$

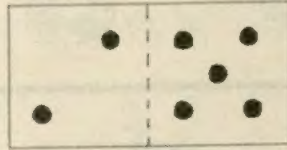


$$\begin{array}{r} 6 + 3 = 9 \\ \text{.....} \end{array}$$

B



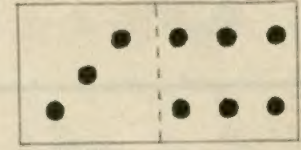
$$\begin{array}{r} 3 + 4 = 7 \\ \text{.....} \end{array}$$



$$\begin{array}{r} 2 + 5 = 7 \\ \text{.....} \end{array}$$



$$\begin{array}{r} 4 + 4 = 8 \\ \text{.....} \end{array}$$



$$\begin{array}{r} 3 + 6 = 9 \\ \text{.....} \end{array}$$

Write answers only: work across the page

C

1	2	3	4	5	6	7	8	9	10	11	12
---	---	---	---	---	---	---	---	---	----	----	----

Practice:

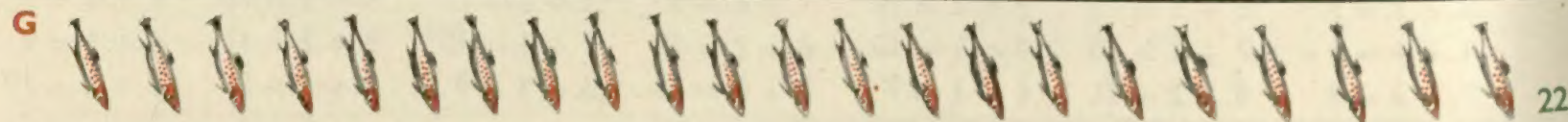
$5 + 2 = 7$	$7 + 2 = 9$	$4 + 3 = 7$	$3 + 4 = 7$	$7 + 1 = 8$	$9 + 1 = 10$	$8 + 1 = 9$
$1 + 3 = 4$	$7 + 1 = 8$	$8 + 2 = 10$	$6 + 3 = 9$	$1 + 4 = 5$	$7 + 2 = 9$	$3 + 4 = 7$
$2 + 4 = 6$	$5 + 2 = 7$	$7 + 2 = 9$	$4 + 3 = 7$	$7 + 3 = 10$	$1 + 3 = 4$	$7 + 1 = 8$
$8 + 3 = 11$	$7 + 2 = 9$	$3 + 4 = 7$	$9 + 2 = 11$	$8 + 2 = 10$	$6 + 3 = 9$	$1 + 4 = 5$
$4 + 3 = 7$	$3 + 4 = 7$	$4 + 4 = 8$	$1 + 3 = 4$	$7 + 3 = 10$	$9 + 2 = 11$	$4 + 3 = 7$
$8 + 1 = 9$	$1 + 3 = 4$	$8 + 2 = 10$	$6 + 3 = 9$	$9 + 2 = 11$	$1 + 4 = 5$	$8 + 1 = 9$
$6 + 3 = 9$	$8 + 2 = 10$	$9 + 2 = 11$	$1 + 4 = 5$	$4 + 3 = 7$	$8 + 2 = 10$	$3 + 4 = 7$
$1 + 4 = 5$	$7 + 3 = 10$	$9 + 1 = 10$	$8 + 2 = 10$	$7 + 3 = 10$	$9 + 2 = 11$	$6 + 3 = 9$
$7 + 2 = 9$	$9 + 2 = 11$	$4 + 3 = 7$	$7 + 3 = 10$	$6 + 3 = 9$	$7 + 1 = 8$	$7 + 3 = 10$

go to page 6, A

6

How many?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

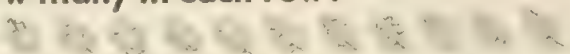






go to page 7, A

A $1 + 1 = 2$ $2 + 1 = 3$ $2 + 2 = 4$ $1 + 2 = 3$ $3 + 1 = 4$ $3 + 2 = 5$ $4 + 1 = 5$
 6 or 7 correct, go to B; 5 or less, practise with apparatus, then go to B

B $6 + 1 = 7$ $3 + 2 = 5$ $5 + 1 = 6$ $5 + 2 = 7$ $4 + 2 = 6$ $7 + 2 = 9$ $6 + 2 = 8$
 6 or 7 correct, go to page 8, C; 5 or less, go to C

C How many in each row?

- (a)  11 (b)  13
 (c)  22
 (d)  20
 (e)  24

What are the missing numbers?

- (f) 2, 3, 4, 5, 6, (g) 7, 8, 9, (h) 6, 7, 8, 9, 10, (i) 9, 10, 11, (j) 10, 11, 12, 13, 14,

Which number comes after

- (k) $3 ? 4$ $8 ? 9$ $5 ? 6$ $7 ? 8$ $12 ? 13$ $4 ? 5$ $15 ? 16$ $9 ? 10$ $11 ? 12$ $17 ? 18$
 (l) $1 ? 2$ $6 ? 7$ $12 ? 13$ $8 ? 9$ $10 ? 11$ $13 ? 14$ $19 ? 20$ $7 ? 8$ $18 ? 19$ $9 ? 10$

go to D

D Add + : work across the page

$2 + 1 = 3$	$3 + 1 = 4$	$4 + 1 = 5$	$4 + 2 = 6$	$3 + 2 = 5$	$5 + 1 = 6$	$5 + 2 = 7$
$1 + 1 = 2$	$6 + 1 = 7$	$3 + 2 = 5$	$6 + 2 = 8$	$5 + 2 = 7$	$7 + 1 = 8$	$7 + 2 = 9$
$3 + 1 = 4$	$2 + 1 = 3$	$2 + 2 = 4$	$4 + 1 = 5$	$4 + 2 = 6$	$3 + 1 = 4$	$3 + 2 = 5$
$2 + 2 = 4$	$6 + 2 = 8$	$4 + 2 = 6$	$5 + 2 = 7$	$3 + 2 = 5$	$6 + 1 = 7$	$7 + 2 = 9$
$4 + 2 = 6$	$7 + 1 = 8$	$7 + 2 = 9$	$3 + 2 = 5$	$2 + 2 = 4$	$6 + 2 = 8$	$5 + 2 = 7$

go to page 8, A

A $5 + 1 = 6$ $6 + 2 = 8$ $3 + 2 = 5$ $7 + 2 = 9$ $4 + 2 = 6$ $6 + 1 = 7$ $5 + 2 = 7$
 6 or 7 correct, go to C; 5 or less, go to B

B Work across the page

$3 + 1 = 4$	$3 + 2 = 5$	$5 + 1 = 6$	$6 + 1 = 7$	$4 + 2 = 6$	$6 + 2 = 8$	$7 + 2 = 9$
$5 + 1 = 6$	$6 + 1 = 7$	$6 + 2 = 8$	$5 + 2 = 7$	$7 + 1 = 8$	$7 + 2 = 9$	$3 + 2 = 5$
$5 + 2 = 7$	$7 + 1 = 8$	$7 + 2 = 9$	$6 + 2 = 8$	$5 + 1 = 6$	$4 + 2 = 6$	$6 + 2 = 8$
$6 + 1 = 7$	$6 + 2 = 8$	$5 + 2 = 7$	$4 + 2 = 6$	$6 + 2 = 8$	$5 + 2 = 7$	$7 + 2 = 9$
$5 + 1 = 6$	$3 + 2 = 5$	$6 + 2 = 8$	$5 + 2 = 7$	$7 + 2 = 9$	$3 + 2 = 5$	$4 + 2 = 6$
$6 + 2 = 8$	$7 + 2 = 9$	$5 + 1 = 6$	$4 + 2 = 6$	$6 + 1 = 7$	$5 + 2 = 7$	$7 + 2 = 9$
$5 + 2 = 7$	$6 + 2 = 8$	$7 + 2 = 9$	$6 + 2 = 8$	$4 + 2 = 6$	$7 + 2 = 9$	$5 + 2 = 7$

go to C

C $7 + 1 = 8$ $8 + 1 = 9$ $7 + 2 = 9$ $8 + 2 = 10$ $9 + 1 = 10$ $1 + 3 = 4$ $9 + 2 = 11$
 6 or 7 correct, go to page 9, A; 5 or less, go to D

D Work across the page

$3 + 1 = 4$	$1 + 3 = 4$	$3 + 2 = 5$	$5 + 2 = 7$	$6 + 2 = 8$	$7 + 1 = 8$	$4 + 2 = 6$
$5 + 1 = 6$	$7 + 1 = 8$	$7 + 2 = 9$	$1 + 3 = 4$	$8 + 1 = 9$	$8 + 2 = 10$	$1 + 3 = 4$
$3 + 1 = 4$	$1 + 3 = 4$	$7 + 1 = 8$	$8 + 1 = 9$	$8 + 2 = 10$	$9 + 2 = 11$	$7 + 2 = 9$
$9 + 1 = 10$	$9 + 2 = 11$	$1 + 3 = 4$	$7 + 2 = 9$	$1 + 3 = 4$	$9 + 1 = 10$	$9 + 2 = 11$
$7 + 1 = 8$	$8 + 1 = 9$	$8 + 2 = 10$	$9 + 1 = 10$	$9 + 2 = 11$	$1 + 3 = 4$	$8 + 2 = 10$
$8 + 2 = 10$	$9 + 1 = 10$	$9 + 2 = 11$	$7 + 1 = 8$	$8 + 2 = 10$	$9 + 2 = 11$	$1 + 3 = 4$
$8 + 1 = 9$	$8 + 2 = 10$	$1 + 3 = 4$	$9 + 2 = 11$	$7 + 2 = 9$	$9 + 1 = 10$	$9 + 2 = 11$

go to page 10, A

A $1 + 2 = 3$ $2 + 3 = 5$ $3 + 3 = 6$ $9 + 2 = 11$ $5 + 3 = 8$ $4 + 3 = 7$ $6 + 3 = 9$
 6 or 7 correct, go to C; 5 or less, go to B

B Work across the page

$2 + 2 = 4$	$4 + 2 = 6$	$1 + 2 = 3$	$1 + 3 = 4$	$2 + 3 = 5$	$3 + 3 = 6$	$5 + 3 = 8$
$4 + 3 = 7$	$3 + 3 = 6$	$5 + 3 = 8$	$6 + 2 = 8$	$3 + 3 = 6$	$4 + 3 = 7$	$6 + 3 = 9$
$1 + 2 = 3$	$2 + 2 = 4$	$2 + 3 = 5$	$4 + 3 = 7$	$6 + 3 = 9$	$5 + 3 = 8$	$3 + 3 = 6$
$3 + 3 = 6$	$6 + 3 = 9$	$4 + 3 = 7$	$5 + 3 = 8$	$4 + 3 = 7$	$3 + 3 = 6$	$6 + 3 = 9$
$4 + 3 = 7$	$5 + 3 = 8$	$6 + 3 = 9$	$4 + 3 = 7$	$3 + 3 = 6$	$6 + 3 = 9$	$5 + 3 = 8$
$6 + 3 = 9$	$3 + 3 = 6$	$2 + 3 = 5$	$5 + 3 = 8$	$4 + 3 = 7$	$2 + 3 = 5$	$6 + 3 = 9$

go to page 10, C

C Practice: work across the page

	1	2	3	4	5	6	7	8	9	10	11	12
$4 + 1 = 5$	$1 + 4 = 5$	$2 + 4 = 6$	$3 + 4 = 7$	$6 + 3 = 9$	$7 + 3 = 10$	$8 + 3 = 11$						
$4 + 4 = 8$	$6 + 3 = 9$	$3 + 4 = 7$	$8 + 3 = 11$	$2 + 4 = 6$	$1 + 5 = 6$	$1 + 4 = 5$						
$2 + 4 = 6$	$8 + 3 = 11$	$7 + 3 = 10$	$3 + 4 = 7$	$2 + 5 = 7$	$2 + 6 = 8$	$4 + 4 = 8$						
$2 + 5 = 7$	$1 + 4 = 5$	$2 + 6 = 8$	$1 + 5 = 6$	$3 + 5 = 8$	$2 + 4 = 6$	$7 + 3 = 10$						
$6 + 3 = 9$	$2 + 6 = 8$	$3 + 4 = 7$	$2 + 5 = 7$	$4 + 4 = 8$	$6 + 3 = 9$	$3 + 4 = 7$						
$4 + 4 = 8$	$1 + 7 = 8$	$7 + 3 = 10$	$2 + 6 = 8$	$5 + 4 = 9$	$2 + 5 = 7$	$8 + 3 = 11$						
$9 + 3 = 12$	$5 + 4 = 9$	$4 + 5 = 9$	$6 + 4 = 10$	$9 + 3 = 12$	$1 + 7 = 8$	$4 + 5 = 9$						
$6 + 4 = 10$	$5 + 5 = 10$	$9 + 3 = 12$	$7 + 4 = 11$	$5 + 4 = 9$	$5 + 5 = 10$	$9 + 3 = 12$						
$7 + 4 = 11$	$8 + 3 = 11$	$6 + 4 = 10$	$9 + 3 = 12$	$7 + 4 = 11$	$6 + 4 = 10$	$5 + 5 = 10$						
$4 + 5 = 9$	$7 + 4 = 11$	$3 + 5 = 8$	$8 + 3 = 11$	$5 + 5 = 10$	$9 + 3 = 12$	$7 + 4 = 11$						

go to page 10, E

A $8 + 1 = 9$ $7 + 1 = 8$ $7 + 2 = 9$ $8 + 2 = 10$ $9 + 1 = 10$ $1 + 3 = 4$ $9 + 2 = 11$
 6 or 7 correct, go to page 9, A; 5 or less, go to B

B **Work across the page**

$2 + 1 = 3$	$1 + 2 = 3$	$1 + 3 = 4$	$5 + 2 = 7$	$6 + 2 = 8$	$7 + 2 = 9$	$8 + 2 = 10$
$9 + 1 = 10$	$9 + 2 = 11$	$7 + 1 = 8$	$7 + 2 = 9$	$1 + 3 = 4$	$8 + 2 = 10$	$7 + 2 = 9$
$8 + 1 = 9$	$1 + 3 = 4$	$7 + 2 = 9$	$9 + 2 = 11$	$8 + 2 = 10$	$9 + 2 = 11$	$1 + 3 = 4$
$7 + 1 = 8$	$8 + 2 = 10$	$9 + 1 = 10$	$1 + 3 = 4$	$7 + 2 = 9$	$8 + 2 = 10$	$9 + 2 = 11$
$1 + 3 = 4$	$7 + 1 = 8$	$7 + 2 = 9$	$8 + 2 = 10$	$9 + 1 = 10$	$1 + 3 = 4$	$7 + 2 = 9$
$7 + 2 = 9$	$8 + 2 = 10$	$9 + 2 = 11$	$7 + 2 = 9$	$8 + 2 = 10$	$8 + 1 = 9$	$9 + 2 = 11$

go to page 9, A

C $2 + 3 = 5$ $1 + 2 = 3$ $4 + 3 = 7$ $5 + 3 = 8$ $9 + 2 = 11$ $3 + 3 = 6$ $6 + 3 = 9$
 6 or 7 correct, go to page 9, C; 5 or less, go to D

D **Work across the page**

$1 + 2 = 3$	$1 + 3 = 4$	$2 + 2 = 4$	$3 + 3 = 6$	$5 + 2 = 7$	$5 + 3 = 8$	$4 + 3 = 7$
$6 + 1 = 7$	$6 + 2 = 8$	$6 + 3 = 9$	$4 + 3 = 7$	$5 + 3 = 8$	$4 + 3 = 7$	$6 + 3 = 9$
$3 + 3 = 6$	$1 + 2 = 3$	$2 + 3 = 5$	$5 + 3 = 8$	$6 + 3 = 9$	$5 + 3 = 8$	$2 + 3 = 5$
$6 + 3 = 9$	$4 + 3 = 7$	$5 + 3 = 8$	$3 + 3 = 6$	$5 + 3 = 8$	$4 + 3 = 7$	$6 + 3 = 9$
$1 + 2 = 3$	$2 + 3 = 5$	$3 + 3 = 6$	$6 + 3 = 9$	$4 + 3 = 7$	$3 + 3 = 6$	$5 + 3 = 8$
$9 + 2 = 11$	$6 + 3 = 9$	$5 + 3 = 8$	$9 + 2 = 11$	$6 + 3 = 9$	$4 + 3 = 7$	$9 + 2 = 11$
$5 + 3 = 8$	$2 + 3 = 5$	$4 + 3 = 7$	$6 + 3 = 9$	$5 + 3 = 8$	$9 + 2 = 11$	$6 + 3 = 9$

go to page 9, C

E $2 + 4 = 6$ $7 + 3 = 10$ $1 + 4 = 5$ $3 + 4 = 7$ $6 + 3 = 9$ $4 + 4 = 8$ $8 + 3 = 11$
 6 or 7 correct, go to page 11, B; 5 or less, go to page 11, A

A Work across the page

$4 + 1 = 5$	$1 + 4 = 5$	$4 + 2 = 6$	$2 + 4 = 6$	$4 + 3 = 7$	$3 + 4 = 7$	$4 + 4 = 8$
$7 + 1 = 8$	$7 + 2 = 9$	$7 + 3 = 10$	$8 + 1 = 9$	$8 + 2 = 10$	$8 + 3 = 11$	$4 + 4 = 8$
$8 + 2 = 10$	$8 + 3 = 11$	$4 + 4 = 8$	$4 + 1 = 5$	$1 + 4 = 5$	$7 + 3 = 10$	$8 + 3 = 11$
$4 + 3 = 7$	$3 + 4 = 7$	$8 + 3 = 11$	$1 + 4 = 5$	$7 + 3 = 10$	$4 + 4 = 8$	$7 + 3 = 10$
$8 + 3 = 11$	$7 + 3 = 10$	$1 + 4 = 5$	$4 + 4 = 8$	$2 + 4 = 6$	$8 + 3 = 11$	$1 + 4 = 5$
$2 + 4 = 6$	$4 + 4 = 8$	$7 + 3 = 10$	$3 + 4 = 7$	$8 + 3 = 11$	$7 + 3 = 10$	$4 + 4 = 8$
$6 + 3 = 9$	$8 + 3 = 11$	$3 + 4 = 7$	$8 + 3 = 11$	$7 + 3 = 10$	$4 + 4 = 8$	$8 + 3 = 11$
$8 + 3 = 11$	$3 + 4 = 7$	$2 + 4 = 6$	$4 + 3 = 7$	$4 + 4 = 8$	$3 + 8 = 11$	$6 + 3 = 9$

go to page 12, A

B $5 + 2 = 7$ $2 + 5 = 7$ $1 + 5 = 6$ $2 + 6 = 8$ $9 + 3 = 12$ $8 + 3 = 11$ $1 + 7 = 8$
6 or 7 correct, go to page 13, A; 5 or less, go to C

$5 + 1 = 6$	$1 + 5 = 6$	$5 + 2 = 7$	$1 + 7 = 8$	$6 + 2 = 8$	$8 + 3 = 11$	$9 + 3 = 12$
$2 + 1 = 3$	$1 + 2 = 3$	$5 + 1 = 6$	$1 + 5 = 6$	$5 + 2 = 7$	$2 + 5 = 7$	$9 + 3 = 12$
$5 + 1 = 6$	$1 + 5 = 6$	$5 + 2 = 7$	$2 + 7 = 9$	$6 + 2 = 8$	$2 + 6 = 8$	$1 + 7 = 8$
$9 + 3 = 12$	$2 + 6 = 8$	$1 + 7 = 8$	$9 + 3 = 12$	$1 + 5 = 6$	$1 + 7 = 8$	$9 + 3 = 12$
$2 + 6 = 8$	$1 + 5 = 6$	$2 + 5 = 7$	$2 + 6 = 8$	$5 + 2 = 7$	$9 + 3 = 12$	$2 + 5 = 7$
$2 + 5 = 7$	$9 + 3 = 12$	$1 + 5 = 6$	$9 + 3 = 12$	$1 + 7 = 8$	$2 + 6 = 8$	$9 + 3 = 12$
$5 + 2 = 7$	$6 + 2 = 8$	$2 + 6 = 8$	$8 + 3 = 11$	$2 + 5 = 7$	$9 + 3 = 12$	$1 + 7 = 8$
$9 + 3 = 12$	$2 + 5 = 7$	$8 + 3 = 11$	$9 + 3 = 12$	$6 + 2 = 8$	$2 + 5 = 7$	$8 + 3 = 11$
$1 + 7 = 8$	$2 + 6 = 8$	$2 + 5 = 7$	$1 + 5 = 6$	$8 + 3 = 11$	$2 + 6 = 8$	$9 + 3 = 12$
$2 + 6 = 8$	$2 + 5 = 7$	$9 + 3 = 12$	$2 + 6 = 8$	$5 + 2 = 7$	$9 + 3 = 12$	$2 + 5 = 7$

go to page 12, C

A $1 + 4 = 5$ $8 + 3 = 11$ $3 + 4 = 7$ $4 + 4 = 8$ $6 + 3 = 9$ $2 + 4 = 6$ $7 + 3 = 10$
 6 or 7 correct, go to page 11, B; 5 or less, go to B

B $4 + 2 = 6$ $1 + 4 = 5$ $2 + 4 = 6$ $4 + 3 = 7$ $3 + 4 = 7$ $2 + 4 = 6$ $4 + 4 = 8$
 $1 + 4 = 5$ $8 + 3 = 11$ $2 + 4 = 6$ $7 + 3 = 10$ $4 + 4 = 8$ $8 + 3 = 11$ $3 + 4 = 7$
 $7 + 3 = 10$ $4 + 4 = 8$ $8 + 3 = 11$ $3 + 4 = 7$ $7 + 3 = 10$ $2 + 4 = 6$ $4 + 4 = 8$
 $2 + 4 = 6$ $7 + 3 = 10$ $3 + 4 = 7$ $4 + 4 = 8$ $8 + 3 = 11$ $3 + 3 = 6$ $7 + 3 = 10$
 $4 + 4 = 8$ $8 + 3 = 11$ $2 + 4 = 6$ $7 + 3 = 10$ $3 + 4 = 7$ $7 + 3 = 10$ $1 + 4 = 5$
 $4 + 1 = 5$ $1 + 4 = 5$ $3 + 4 = 7$ $8 + 3 = 11$ $4 + 4 = 8$ $6 + 3 = 9$ $8 + 3 = 11$
 $7 + 3 = 10$ $4 + 4 = 8$ $2 + 4 = 6$ $7 + 3 = 10$ $8 + 3 = 11$ $3 + 4 = 7$ $7 + 3 = 10$
 $3 + 4 = 7$ $7 + 3 = 10$ $8 + 3 = 11$ $2 + 4 = 6$ $7 + 3 = 10$ $4 + 4 = 8$ $8 + 3 = 11$
 go to page 11, B

C $2 + 5 = 7$ $1 + 7 = 8$ $2 + 6 = 8$ $1 + 5 = 6$ $5 + 2 = 7$ $8 + 3 = 11$ $9 + 3 = 12$
 6 or 7 correct, go to page 13, A; 5 or less, go to D

D $5 + 2 = 7$ $2 + 5 = 7$ $5 + 1 = 6$ $1 + 5 = 6$ $6 + 2 = 8$ $2 + 6 = 8$ $9 + 3 = 12$
 $7 + 1 = 8$ $1 + 7 = 8$ $6 + 2 = 8$ $2 + 6 = 8$ $9 + 3 = 12$ $2 + 5 = 7$ $1 + 5 = 6$
 $6 + 2 = 8$ $2 + 6 = 8$ $1 + 5 = 6$ $9 + 3 = 12$ $1 + 7 = 8$ $2 + 6 = 8$ $2 + 5 = 7$
 $1 + 7 = 8$ $5 + 2 = 7$ $2 + 6 = 8$ $1 + 7 = 8$ $2 + 5 = 7$ $2 + 5 = 7$ $9 + 3 = 12$
 $9 + 3 = 12$ $2 + 6 = 8$ $2 + 5 = 7$ $2 + 6 = 8$ $1 + 5 = 6$ $9 + 3 = 12$ $1 + 7 = 8$
 $1 + 5 = 6$ $1 + 7 = 8$ $5 + 2 = 7$ $2 + 5 = 7$ $8 + 3 = 11$ $2 + 6 = 8$ $9 + 3 = 12$
 $2 + 6 = 8$ $8 + 3 = 11$ $9 + 3 = 12$ $2 + 6 = 8$ $9 + 3 = 12$ $2 + 5 = 7$ $8 + 3 = 11$
 $8 + 3 = 11$ $2 + 6 = 8$ $2 + 5 = 7$ $9 + 3 = 12$ $2 + 6 = 8$ $8 + 3 = 11$ $9 + 3 = 12$
 $9 + 3 = 12$ $2 + 5 = 7$ $5 + 2 = 7$ $2 + 6 = 8$ $9 + 3 = 12$ $6 + 2 = 8$ $8 + 3 = 11$
 go to page 13, A

A $5 + 4 = 9$ $3 + 5 = 8$ $6 + 4 = 10$ $9 + 3 = 12$ $5 + 5 = 10$ $7 + 4 = 11$ $4 + 5 = 9$
6 or 7 correct, go to C; 5 or less, go to B

B	$3 + 1 = 4$	$1 + 3 = 4$	$5 + 3 = 8$	$3 + 5 = 8$	$5 + 4 = 9$	$4 + 5 = 9$	$5 + 5 = 10$
	$3 + 5 = 8$	$4 + 5 = 9$	$6 + 4 = 10$	$7 + 4 = 11$	$9 + 3 = 12$	$5 + 5 = 10$	$5 + 3 = 8$
	$6 + 4 = 10$	$5 + 3 = 8$	$1 + 3 = 4$	$3 + 5 = 8$	$6 + 4 = 10$	$4 + 5 = 9$	$9 + 3 = 12$
	$4 + 5 = 9$	$5 + 4 = 9$	$7 + 4 = 11$	$5 + 5 = 10$	$3 + 5 = 8$	$6 + 4 = 10$	$5 + 5 = 10$
	$5 + 3 = 8$	$3 + 5 = 8$	$6 + 4 = 10$	$4 + 5 = 9$	$7 + 4 = 11$	$5 + 4 = 9$	$6 + 4 = 10$
	$4 + 5 = 9$	$6 + 4 = 10$	$5 + 5 = 10$	$3 + 5 = 8$	$5 + 5 = 10$	$4 + 5 = 9$	$7 + 4 = 11$
	$7 + 4 = 11$	$3 + 5 = 8$	$4 + 5 = 9$	$5 + 4 = 9$	$7 + 4 = 11$	$6 + 4 = 10$	$5 + 5 = 10$
	$5 + 5 = 10$	$6 + 4 = 10$	$7 + 4 = 11$	$3 + 5 = 8$	$4 + 5 = 9$	$7 + 4 = 11$	$5 + 4 = 9$

go to page 14, A

 Revision: work across the page

$1 + 1 = 2$	$2 + 1 = 3$	$1 + 2 = 3$	$2 + 2 = 4$	$3 + 1 = 4$	$1 + 3 = 4$	$4 + 1 = 5$
$4 + 2 = 6$	$2 + 4 = 6$	$3 + 2 = 5$	$2 + 3 = 5$	$3 + 3 = 6$	$4 + 4 = 8$	$5 + 2 = 7$
$2 + 5 = 7$	$3 + 3 = 6$	$1 + 4 = 5$	$4 + 4 = 8$	$2 + 4 = 6$	$2 + 5 = 7$	$1 + 4 = 5$
$4 + 3 = 7$	$3 + 4 = 7$	$5 + 3 = 8$	$3 + 5 = 8$	$6 + 2 = 8$	$2 + 6 = 8$	$4 + 4 = 8$
$6 + 1 = 7$	$1 + 6 = 7$	$5 + 4 = 9$	$4 + 5 = 9$	$7 + 1 = 8$	$1 + 7 = 8$	$6 + 3 = 9$
$3 + 5 = 8$	$7 + 4 = 11$	$8 + 3 = 11$	$1 + 6 = 7$	$2 + 5 = 7$	$3 + 6 = 9$	$4 + 5 = 9$
$8 + 1 = 9$	$7 + 2 = 9$	$9 + 1 = 10$	$8 + 2 = 10$	$7 + 3 = 10$	$8 + 3 = 11$	$7 + 4 = 11$
$6 + 4 = 10$	$4 + 5 = 9$	$9 + 2 = 11$	$7 + 4 = 11$	$9 + 3 = 12$	$6 + 3 = 9$	$3 + 4 = 7$
$9 + 3 = 12$	$2 + 6 = 8$	$5 + 5 = 10$	$4 + 5 = 9$	$6 + 4 = 10$	$5 + 5 = 10$	$3 + 5 = 8$
$2 + 5 = 7$	$5 + 4 = 9$	$2 + 6 = 8$	$7 + 4 = 11$	$5 + 5 = 10$	$9 + 3 = 12$	$7 + 3 = 10$
$6 + 4 = 10$	$3 + 5 = 8$	$7 + 4 = 11$	$9 + 3 = 12$	$2 + 6 = 8$	$8 + 3 = 11$	$4 + 5 = 9$

go to page 14, C

A $5 + 4 = 9$ $4 + 5 = 9$ $3 + 5 = 8$ $8 + 3 = 11$ $6 + 4 = 10$ $5 + 5 = 10$ $7 + 4 = 11$
 6 or 7 correct, go to page 13, C; 5 or less, go to B

B

$2 + 1 = 3$	$1 + 2 = 3$	$3 + 2 = 5$	$2 + 3 = 5$	$5 + 3 = 8$	$3 + 5 = 8$	$5 + 5 = 10$
$5 + 4 = 9$	$4 + 5 = 9$	$6 + 4 = 10$	$7 + 4 = 11$	$5 + 5 = 10$	$7 + 4 = 11$	$6 + 4 = 10$
$5 + 3 = 8$	$3 + 5 = 8$	$5 + 4 = 9$	$4 + 5 = 9$	$6 + 4 = 10$	$5 + 5 = 10$	$7 + 4 = 11$
$5 + 4 = 9$	$5 + 5 = 10$	$3 + 5 = 8$	$6 + 4 = 10$	$5 + 5 = 10$	$7 + 4 = 11$	$6 + 4 = 10$
$3 + 5 = 8$	$7 + 4 = 11$	$4 + 5 = 9$	$5 + 4 = 9$	$7 + 4 = 11$	$6 + 4 = 10$	$5 + 5 = 10$
$7 + 4 = 11$	$5 + 5 = 10$	$6 + 4 = 10$	$4 + 5 = 9$	$6 + 4 = 10$	$5 + 4 = 9$	$7 + 4 = 11$
$3 + 5 = 8$	$2 + 3 = 5$	$5 + 5 = 10$	$6 + 4 = 10$	$3 + 5 = 8$	$7 + 4 = 11$	$5 + 5 = 10$
$7 + 4 = 11$	$5 + 5 = 10$	$6 + 4 = 10$	$4 + 5 = 9$	$6 + 4 = 10$	$5 + 4 = 9$	$7 + 4 = 11$
$3 + 5 = 8$	$2 + 3 = 5$	$5 + 5 = 10$	$6 + 4 = 10$	$3 + 5 = 8$	$7 + 4 = 11$	$5 + 5 = 10$
$7 + 4 = 11$	$6 + 4 = 10$	$7 + 3 = 10$	$5 + 5 = 10$	$4 + 5 = 9$	$5 + 5 = 10$	$7 + 4 = 11$
$4 + 5 = 9$	$3 + 5 = 8$	$5 + 5 = 10$	$7 + 4 = 11$	$2 + 5 = 7$	$6 + 4 = 10$	$4 + 5 = 9$

go to page 13, C

C

$2 + 3 = 5$	$3 + 4 = 7$	$2 + 5 = 7$	$3 + 3 = 6$	$4 + 2 = 6$	$2 + 6 = 8$	$2 + 4 = 6$
$3 + 5 = 8$	$4 + 3 = 7$	$5 + 5 = 10$	$4 + 4 = 8$	$6 + 3 = 9$	$1 + 7 = 8$	$6 + 4 = 10$
$4 + 5 = 9$	$9 + 1 = 10$	$8 + 2 = 10$	$9 + 3 = 12$	$7 + 4 = 11$	$9 + 2 = 11$	$8 + 3 = 11$

13 or 14 correct, go to page 15, C; 12 or less, go to D

D

$1 + 7 = 8$	$4 + 3 = 7$	$3 + 4 = 7$	$5 + 3 = 8$	$3 + 5 = 8$	$2 + 6 = 8$	$4 + 4 = 8$
$3 + 5 = 8$	$8 + 3 = 11$	$2 + 6 = 8$	$8 + 3 = 11$	$6 + 3 = 9$	$5 + 4 = 9$	$3 + 9 = 12$
$4 + 5 = 9$	$5 + 4 = 9$	$9 + 2 = 11$	$9 + 3 = 12$	$7 + 4 = 11$	$5 + 5 = 10$	$2 + 9 = 11$
$6 + 4 = 10$	$7 + 3 = 10$	$4 + 6 = 10$	$9 + 2 = 11$	$4 + 3 = 7$	$7 + 4 = 11$	$8 + 2 = 10$

go to page 15, A

A	$2 + 3 = 5$	$1 + 7 = 8$	$3 + 4 = 7$	$8 + 2 = 10$	$2 + 5 = 7$	$7 + 4 = 11$	$8 + 2 = 10$
	$2 + 6 = 8$	$9 + 2 = 11$	$5 + 4 = 9$	$8 + 3 = 11$	$3 + 5 = 8$	$6 + 3 = 9$	$9 + 3 = 12$

13 or 14 correct, go to C; 12 or less, go to B

B	$2 + 1 = 3$	$1 + 2 = 3$	$3 + 1 = 4$	$1 + 3 = 4$	$3 + 2 = 5$	$2 + 3 = 5$	$4 + 2 = 6$
	$4 + 1 = 5$	$3 + 4 = 7$	$5 + 2 = 7$	$2 + 5 = 7$	$5 + 1 = 6$	$3 + 3 = 6$	$4 + 3 = 7$
	$2 + 2 = 4$	$4 + 4 = 8$	$6 + 1 = 7$	$1 + 6 = 7$	$5 + 2 = 7$	$2 + 5 = 7$	$1 + 7 = 8$
	$5 + 3 = 8$	$3 + 5 = 8$	$8 + 1 = 9$	$7 + 2 = 9$	$9 + 1 = 10$	$8 + 2 = 10$	$5 + 4 = 9$
	$9 + 2 = 11$	$7 + 3 = 10$	$6 + 2 = 8$	$2 + 6 = 8$	$5 + 5 = 10$	$6 + 3 = 9$	$7 + 3 = 10$
	$6 + 4 = 10$	$4 + 6 = 10$	$7 + 4 = 11$	$8 + 3 = 11$	$6 + 4 = 10$	$4 + 5 = 9$	$5 + 5 = 10$
	$8 + 1 = 9$	$8 + 3 = 11$	$8 + 2 = 10$	$9 + 3 = 12$	$5 + 5 = 10$	$9 + 2 = 11$	$2 + 6 = 8$
	$3 + 4 = 7$	$4 + 5 = 9$	$9 + 2 = 11$	$3 + 5 = 8$	$4 + 4 = 8$	$9 + 3 = 12$	$7 + 3 = 10$

go to C

C	Practice:					
	$7 + 2 = 9$	$2 + 7 = 9$	$6 + 4 = 10$	$4 + 6 = 10$	$7 + 3 = 10$	$3 + 7 = 10$
	$7 + 6 = 13$	$6 + 7 = 13$	$6 + 5 = 11$	$5 + 6 = 11$	$2 + 7 = 9$	$9 + 4 = 13$
	$7 + 3 = 10$	$7 + 5 = 12$	$5 + 7 = 12$	$7 + 6 = 13$	$4 + 6 = 10$	$7 + 5 = 12$
	$7 + 6 = 13$	$4 + 6 = 10$	$9 + 4 = 13$	$8 + 5 = 13$	$3 + 7 = 10$	$6 + 7 = 13$
	$8 + 5 = 13$	$3 + 7 = 10$	$6 + 7 = 13$	$7 + 5 = 12$	$7 + 6 = 13$	$5 + 7 = 12$
	$7 + 5 = 12$	$5 + 7 = 12$	$10 + 1 = 11$	$10 + 2 = 12$	$6 + 6 = 12$	$10 + 2 = 12$
	$10 + 3 = 13$	$7 + 6 = 13$	$10 + 3 = 13$	$10 + 5 = 15$	$6 + 7 = 13$	$8 + 5 = 13$
	$5 + 7 = 12$	$4 + 6 = 10$	$10 + 4 = 14$	$6 + 6 = 12$	$5 + 7 = 12$	$10 + 3 = 13$
	$3 + 7 = 10$	$6 + 7 = 13$	$7 + 5 = 12$	$9 + 4 = 13$	$8 + 5 = 13$	$10 + 6 = 16$
	$10 + 6 = 16$	$8 + 5 = 13$	$6 + 6 = 12$	$10 + 5 = 15$	$6 + 7 = 13$	$10 + 4 = 14$

go to page 16, A

A $4 + 6 = 10$ $6 + 5 = 11$ $2 + 7 = 9$ $5 + 6 = 11$ $8 + 4 = 12$ $2 + 6 = 8$ $6 + 6 = 12$
 6 or 7 correct, go to C; 5 or less, go to B

B $6 + 4 = 10$ $4 + 6 = 10$ $6 + 5 = 11$ $5 + 6 = 11$ $7 + 2 = 9$ $2 + 7 = 9$ $6 + 6 = 12$

 $8 + 4 = 12$ $2 + 7 = 9$ $6 + 6 = 12$ $4 + 6 = 10$ $8 + 4 = 12$ $5 + 6 = 11$ $4 + 6 = 10$
 $6 + 6 = 12$ $6 + 5 = 11$ $2 + 7 = 9$ $5 + 6 = 11$ $6 + 6 = 12$ $2 + 7 = 9$ $6 + 6 = 12$
 $2 + 7 = 9$ $4 + 6 = 10$ $8 + 4 = 12$ $6 + 6 = 12$ $2 + 7 = 9$ $6 + 5 = 11$ $2 + 7 = 9$
 $8 + 4 = 12$ $6 + 6 = 12$ $6 + 5 = 11$ $4 + 6 = 10$ $6 + 6 = 12$ $2 + 7 = 9$ $5 + 6 = 11$
 $2 + 7 = 9$ $5 + 6 = 11$ $8 + 4 = 12$ $2 + 7 = 9$ $6 + 5 = 11$ $4 + 6 = 10$ $6 + 6 = 12$
 $4 + 6 = 10$ $8 + 4 = 12$ $2 + 7 = 9$ $4 + 6 = 10$ $6 + 6 = 12$ $5 + 6 = 11$ $6 + 5 = 11$
 $6 + 5 = 11$ $2 + 6 = 8$ $4 + 6 = 10$ $6 + 6 = 12$ $8 + 4 = 12$ $6 + 5 = 11$ $2 + 7 = 9$
 $2 + 6 = 8$ $6 + 6 = 12$ $5 + 6 = 11$ $2 + 6 = 8$ $2 + 7 = 9$ $8 + 4 = 12$ $5 + 6 = 11$
 $5 + 6 = 11$ $2 + 7 = 9$ $8 + 4 = 12$ $6 + 6 = 12$ $2 + 6 = 8$ $6 + 5 = 11$ $7 + 2 = 9$

go to page 18, A

C $10 + 1 = 11$ $10 + 3 = 13$ $10 + 4 = 14$ $10 + 2 = 12$ $10 + 5 = 15$ $8 + 5 = 13$ $10 + 6 = 16$
 6 or 7 correct, go to page 17, A; 5 or less, go to D

D $10 + 1 = 11$ $10 + 2 = 12$ $10 + 3 = 13$ $10 + 5 = 15$ $10 + 4 = 14$ $10 + 6 = 16$ $10 + 4 = 14$

 $10 + 2 = 12$ $10 + 5 = 15$ $10 + 4 = 14$ $10 + 6 = 16$ $10 + 3 = 13$ $10 + 5 = 15$ $10 + 2 = 12$
 $10 + 1 = 11$ $10 + 3 = 13$ $10 + 2 = 12$ $10 + 5 = 15$ $10 + 4 = 14$ $10 + 1 = 11$ $10 + 6 = 16$
 $10 + 6 = 16$ $10 + 4 = 14$ $10 + 1 = 11$ $10 + 3 = 13$ $10 + 6 = 16$ $10 + 5 = 15$ $10 + 4 = 14$
 $10 + 5 = 15$ $10 + 2 = 12$ $10 + 6 = 16$ $10 + 4 = 14$ $10 + 3 = 13$ $10 + 1 = 11$ $10 + 5 = 15$
 $10 + 1 = 11$ $10 + 6 = 16$ $10 + 4 = 14$ $10 + 2 = 12$ $10 + 5 = 15$ $10 + 6 = 16$ $10 + 3 = 13$
 $8 + 3 = 11$ $8 + 4 = 12$ $8 + 5 = 13$ $10 + 5 = 15$ $10 + 6 = 16$ $10 + 7 = 17$ $10 + 4 = 14$

go to page 18, C

A Complete:

$$2 \text{ apples} + 1 \text{ apple} = \underline{\dots} \text{ apples}$$



$$2 \text{ apples} + 0 \text{ apples} = \underline{\dots} \text{ apples}$$



$$4 \text{ apples} + 2 \text{ apples} = \underline{\dots} \text{ apples}$$



$$4 \text{ apples} + 0 \text{ apples} = \underline{\dots} \text{ apples}$$



$$3 \text{ apples} + 0 \text{ apples} = \underline{\dots} \text{ apples}$$



$$0 \text{ apples} + 3 \text{ apples} = \underline{\dots} \text{ apples}$$

go to B

B Practice:

$2 + 1 = 3$	$2 + 0 = 2$	$1 + 1 = 2$	$1 + 0 = 1$	$3 + 2 = 5$	$3 + 0 = 3$	$5 + 0 = 5$
$4 + 0 = 4$	$6 + 0 = 6$	$3 + 3 = 6$	$3 + 0 = 3$	$2 + 5 = 7$	$4 + 4 = 8$	$4 + 0 = 4$
$5 + 2 = 7$	$2 + 5 = 7$	$7 + 0 = 7$	$7 + 2 = 9$	$2 + 7 = 9$	$8 + 2 = 10$	$9 + 2 = 11$
$3 + 5 = 8$	$5 + 0 = 5$	$3 + 4 = 7$	$6 + 3 = 9$	$3 + 6 = 9$	$7 + 3 = 10$	$8 + 4 = 12$
$4 + 4 = 8$	$1 + 0 = 1$	$0 + 0 = 0$	$2 + 6 = 8$	$9 + 3 = 12$	$2 + 0 = 2$	$0 + 2 = 2$
$5 + 4 = 9$	$4 + 5 = 9$	$4 + 0 = 4$	$0 + 4 = 4$	$5 + 5 = 10$	$0 + 3 = 3$	$4 + 6 = 10$
$6 + 5 = 11$	$7 + 4 = 11$	$0 + 6 = 6$	$6 + 6 = 12$	$8 + 4 = 12$	$7 + 5 = 12$	$0 + 7 = 7$
$10 + 2 = 12$	$0 + 8 = 8$	$9 + 4 = 13$	$8 + 5 = 13$	$7 + 6 = 13$	$6 + 7 = 13$	$8 + 0 = 8$
$7 + 6 = 13$	$3 + 5 = 8$	$0 + 7 = 7$	$10 + 6 = 16$	$9 + 4 = 13$	$9 + 0 = 9$	$8 + 5 = 13$

go to page 19, A

A $6 + 4 = 10$ $4 + 6 = 10$ $2 + 7 = 9$ $5 + 6 = 11$ $8 + 4 = 12$ $6 + 5 = 11$ $6 + 6 = 12$
 6 or 7 correct, go to page 16, C; 5 or less, go to B

B $6 + 4 = 10$ $4 + 6 = 10$ $6 + 5 = 11$ $5 + 6 = 11$ $7 + 2 = 9$ $2 + 7 = 9$ $6 + 6 = 12$

 $6 + 6 = 12$ $7 + 2 = 9$ $2 + 7 = 9$ $2 + 6 = 8$ $6 + 4 = 10$ $5 + 6 = 11$ $6 + 5 = 11$
 $6 + 2 = 8$ $2 + 6 = 8$ $6 + 4 = 10$ $4 + 6 = 10$ $7 + 2 = 9$ $2 + 7 = 9$ $4 + 6 = 10$
 $6 + 5 = 11$ $5 + 6 = 11$ $6 + 5 = 11$ $5 + 6 = 11$ $6 + 6 = 12$ $8 + 4 = 12$ $6 + 6 = 12$
 $6 + 6 = 12$ $4 + 6 = 10$ $8 + 4 = 12$ $2 + 7 = 9$ $5 + 6 = 11$ $4 + 6 = 10$ $2 + 7 = 9$
 $2 + 7 = 9$ $5 + 6 = 11$ $4 + 6 = 10$ $6 + 5 = 11$ $8 + 4 = 12$ $6 + 6 = 12$ $8 + 4 = 12$
 $6 + 4 = 10$ $7 + 2 = 9$ $2 + 7 = 9$ $8 + 4 = 12$ $4 + 6 = 10$ $6 + 5 = 11$ $6 + 6 = 12$
 $2 + 7 = 9$ $8 + 4 = 12$ $4 + 6 = 10$ $6 + 5 = 11$ $6 + 6 = 12$ $4 + 6 = 10$ $8 + 4 = 12$
 $6 + 5 = 11$ $4 + 6 = 10$ $6 + 6 = 12$ $2 + 7 = 9$ $5 + 6 = 11$ $8 + 4 = 12$ $6 + 5 = 11$
 go to page 16, C

C $10 + 2 = 12$ $10 + 1 = 11$ $10 + 4 = 14$ $10 + 3 = 13$ $8 + 5 = 13$ $10 + 6 = 16$ $10 + 5 = 15$
 6 or 7 correct, go to page 17, A; 5 or less, go to D

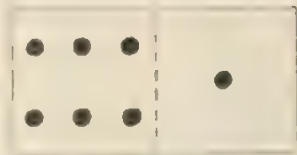
D $10 + 1 = 11$ $10 + 2 = 12$ $10 + 1 = 11$ $10 + 2 = 12$ $10 + 3 = 13$ $10 + 2 = 12$ $10 + 3 = 13$
 $10 + 3 = 13$ $10 + 4 = 14$ $10 + 5 = 15$ $10 + 4 = 14$ $10 + 3 = 13$ $10 + 6 = 16$ $10 + 6 = 16$
 $10 + 5 = 15$ $10 + 3 = 13$ $10 + 6 = 16$ $10 + 3 = 13$ $10 + 5 = 15$ $10 + 4 = 14$ $10 + 2 = 12$
 $10 + 6 = 16$ $10 + 2 = 12$ $10 + 1 = 11$ $10 + 5 = 15$ $10 + 4 = 14$ $10 + 3 = 13$ $10 + 6 = 16$
 $10 + 1 = 11$ $10 + 3 = 13$ $10 + 5 = 15$ $10 + 2 = 12$ $10 + 6 = 16$ $10 + 4 = 14$ $10 + 3 = 13$
 $10 + 2 = 12$ $10 + 6 = 16$ $10 + 4 = 14$ $8 + 4 = 12$ $10 + 5 = 15$ $8 + 4 = 12$ $10 + 6 = 16$
 $10 + 1 = 11$ $10 + 3 = 13$ $10 + 6 = 16$ $8 + 5 = 13$ $10 + 4 = 14$ $10 + 2 = 12$ $10 + 5 = 15$
 $10 + 2 = 12$ $10 + 6 = 16$ $10 + 3 = 13$ $10 + 5 = 15$ $10 + 3 = 13$ $10 + 6 = 16$ $10 + 4 = 14$
 go to page 17, A

A

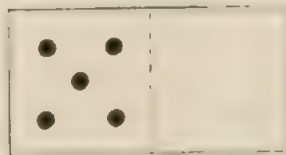
$3 + 1 = 4$	$3 + 0 = 3$	$2 + 3 = 5$	$3 + 2 = 5$	$4 + 0 = 4$	$0 + 4 = 4$	$0 + 3 = 3$
$8 + 2 = 10$	$5 + 0 = 5$	$0 + 5 = 5$	$7 + 3 = 10$	$6 + 0 = 6$	$6 + 5 = 11$	$0 + 6 = 6$
$9 + 0 = 9$	$4 + 4 = 8$	$9 + 4 = 13$	$8 + 0 = 8$	$0 + 7 = 7$	$7 + 7 = 14$	$0 + 0 = 0$

19, 20 or 21 correct, go to page 20, A; 18 or less, go to B

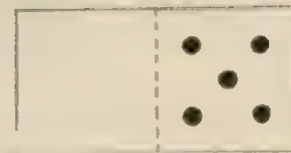
B



$$6 + 1 = 7$$



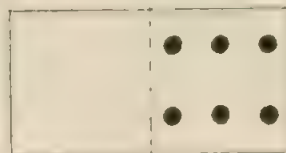
$$5 + 0 = 5$$



$$0 + 5 = 5$$



$$6 + 0 = 6$$



$$0 + 6 = 6$$



$$0 + 3 = 3$$

$1 + 1 = 2$	$1 + 0 = 1$	$0 + 1 = 1$	$2 + 1 = 3$	$1 + 2 = 3$	$2 + 0 = 2$	$0 + 2 = 2$
$3 + 0 = 3$	$0 + 3 = 3$	$2 + 4 = 6$	$5 + 2 = 7$	$2 + 5 = 7$	$6 + 0 = 6$	$0 + 6 = 6$
$10 + 2 = 12$	$3 + 4 = 7$	$0 + 4 = 4$	$4 + 3 = 7$	$10 + 3 = 13$	$3 + 6 = 9$	$7 + 4 = 11$
$4 + 5 = 9$	$6 + 6 = 12$	$2 + 7 = 9$	$0 + 8 = 8$	$5 + 6 = 11$	$8 + 2 = 10$	$10 + 5 = 15$
$3 + 7 = 10$	$8 + 3 = 11$	$9 + 2 = 11$	$10 + 6 = 16$	$6 + 7 = 13$	$8 + 4 = 12$	$7 + 6 = 13$
$9 + 3 = 12$	$3 + 5 = 8$	$9 + 0 = 9$	$9 + 4 = 13$	$8 + 5 = 13$	$0 + 10 = 10$	$8 + 5 = 13$
$3 + 0 = 3$	$0 + 3 = 3$	$0 + 7 = 7$	$8 + 3 = 11$	$10 + 6 = 16$	$7 + 0 = 7$	$8 + 0 = 8$
$6 + 6 = 12$	$6 + 0 = 6$	$10 + 4 = 14$	$0 + 8 = 8$	$7 + 6 = 13$	$6 + 7 = 13$	$9 + 4 = 13$
$5 + 0 = 5$	$5 + 6 = 11$	$4 + 0 = 4$	$7 + 4 = 11$	$0 + 9 = 9$	$2 + 7 = 9$	$0 + 6 = 6$

go to page 20, A

A



Take away —

$$2 \text{ birds} - 1 \text{ bird} = \underline{\quad 1 \quad} \text{ bird}$$

$$2 \text{ birds} - 2 \text{ birds} = \underline{\quad 0 \quad} \text{ birds}$$

go to B

B



Take away —

$$4 \text{ ducks} - 1 \text{ duck} = \underline{\quad 3 \quad} \text{ ducks}$$

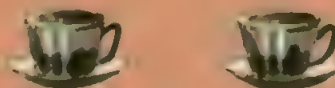
$$4 \text{ ducks} - 2 \text{ ducks} = \underline{\quad 2 \quad} \text{ ducks}$$

$$4 \text{ ducks} - 3 \text{ ducks} = \underline{\quad 1 \quad} \text{ duck}$$

$$4 \text{ ducks} - 4 \text{ ducks} = \underline{\quad 0 \quad} \text{ ducks}$$

go to C

C



Take away —

$$3 \text{ cups} - 1 \text{ cup} = \underline{\quad 2 \quad} \text{ cups}$$

$$3 \text{ cups} - 2 \text{ cups} = \underline{\quad 1 \quad} \text{ cup}$$

$$3 \text{ cups} - 3 \text{ cups} = \underline{\quad 0 \quad} \text{ cups}$$

go to page 21, A

A

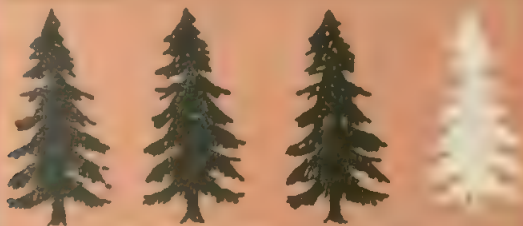


$$3 - 1 = 2$$



$$3 - 2 = 1$$

B



$$4 - 1 = 3$$



$$4 - 3 = 1$$

C



$$5 - 3 = 2$$



$$5 - 2 = 3$$

D



$$5 - 1 = 4$$



$$5 - 4 = 1$$

E



$$3 - 3 = 0$$



$$5 - 5 = 0$$

22 Make your own sums

A



$$\begin{array}{ccc} 2 & - & 1 = 1 \\ \dots & \dots & \dots \end{array}$$



$$\begin{array}{ccc} 2 & - & 2 = 0 \\ \dots & \dots & \dots \end{array}$$

B



$$\begin{array}{ccc} 1 & - & 1 = 0 \\ \dots & \dots & \dots \end{array}$$



$$\begin{array}{ccc} 4 & - & 2 = 2 \\ \dots & \dots & \dots \end{array}$$

C



$$\begin{array}{ccc} 3 & - & 1 = 2 \\ \dots & \dots & \dots \end{array}$$



$$\begin{array}{ccc} 3 & - & 2 = 1 \\ \dots & \dots & \dots \end{array}$$

D



$$\begin{array}{ccc} 4 & - & 3 = 1 \\ \dots & \dots & \dots \end{array}$$



$$\begin{array}{ccc} 4 & - & 1 = 3 \\ \dots & \dots & \dots \end{array}$$

E



$$\begin{array}{ccc} 5 & - & 2 = 3 \\ \dots & \dots & \dots \end{array}$$



$$\begin{array}{ccc} 5 & - & 3 = 2 \\ \dots & \dots & \dots \end{array}$$

go to page 23, A

A



Take away —

$$5 \text{ dogs} - 1 \text{ dog} = \underline{4} \text{ dogs}$$

$$5 \text{ dogs} - 2 \text{ dogs} = \underline{3} \text{ dogs}$$

$$5 \text{ dogs} - 3 \text{ dogs} = \underline{2} \text{ dogs}$$

$$5 \text{ dogs} - 4 \text{ dogs} = \underline{1} \text{ dog}$$

$$5 \text{ dogs} - 5 \text{ dogs} = \underline{0} \text{ dogs}$$

go to B

B

Practice: supply the missing figures

$2 - 1 = 1$

$2 - 1 = 1$

$1 + 1 = 2$

$2 - 1 = 1$

$2 + 1 = 3$

$3 - 2 = 1$

$3 - 1 = 2$

$3 - 1 = 2$

$3 - 2 = 1$

$2 + 1 = 3$

$1 + 2 = 3$

$3 - 2 = 1$

$2 - 1 = 1$

$4 = 3 + 1$

$4 = 1 + 3$

$3 + 1 = 4$

$1 + 3 = 4$

$4 - 1 = 3$

$4 - 3 = 1$

$4 - 1 = 3$

$4 - 3 = 1$

$2 + 2 = 4$

$2 + 2 = 4$

$4 - 2 = 2$

$4 - 2 = 2$

$3 - 1 = 2$

$3 - 2 = 1$

$4 - 3 = 1$

$5 = 3 + 2$

$5 - 3 = 2$

$5 = 2 + 3$

$5 - 2 = 3$

$2 + 3 = 5$

$3 + 2 = 5$

$5 = 2 + 3$

$5 - 2 = 3$

$4 - 2 = 2$

$5 - 3 = 2$

$5 = 4 + 1$

$5 - 4 = 1$

$5 = 1 + 4$

$5 - 1 = 4$

$2 - 1 = 1$

$3 - 2 = 1$

$5 - 4 = 1$

$5 - 3 = 2$

$4 - 3 = 1$

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$4 - 3 = 1$

$5 - 1 = 4$

$4 - 2 = 2$

$5 - 4 = 1$

$5 - 2 = 3$

$3 - 2 = 1$

$5 - 3 = 2$

$5 - 2 = 3$

$4 - 3 = 1$

$5 = 4 + 1$

$5 = 3 + 2$

$5 - 3 = 2$

$5 - 2 = 3$

$4 = 2 + 2$

$4 - 2 = 2$

$4 - 1 = 3$

$3 - 3 = 0$

$2 - 2 = 0$

$5 - 4 = 1$

$5 - 1 = 4$

$3 - 2 = 1$

$5 = 1 + 4$

$5 - 1 = 4$

$4 = 3 + 1$

$4 - 3 = 1$

$4 - 1 = 3$

$5 - 2 = 3$

$5 - 3 = 2$

$4 - 2 = 2$

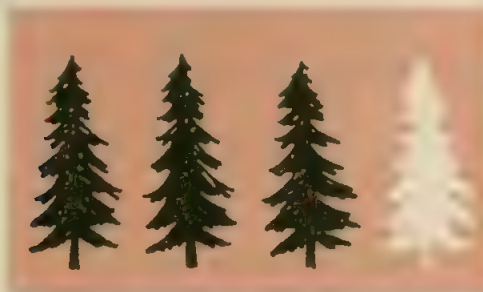
$5 - 3 = 2$

go to page 24, A

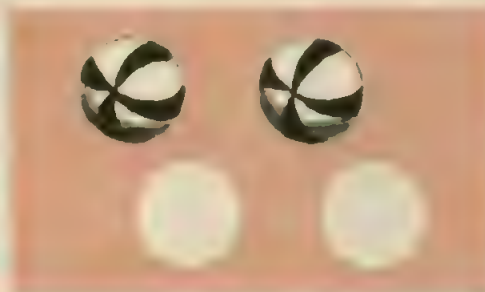
A $2 - 1 = 1$ $4 - 1 = 3$ $3 - 1 = 2$ $5 - 1 = 4$ $7 - 1 = 6$ $6 - 1 = 5$ $1 - 1 = 0$
 6 or 7 correct, go to B; 5 or less, practise with apparatus, then go to B

B $3 - 2 = 1$ $5 - 4 = 1$ $4 - 2 = 2$ $4 - 3 = 1$ $5 - 2 = 3$ $2 - 2 = 0$ $5 - 3 = 2$
 6 or 7 correct, go to page 25, A; 5 or less, go to C

C



$$4 - 1 = 3$$



$$4 - 2 = 2$$



$$5 - 2 = 3$$

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

$2 - 1 = 1$	$3 - 1 = 2$	$3 - 2 = 1$	$4 - 1 = 3$	$4 - 3 = 1$	$5 - 1 = 4$	$5 - 4 = 1$
$5 - 2 = 3$	$5 - 3 = 2$	$5 - 1 = 4$	$4 - 2 = 2$	$3 - 1 = 2$	$2 - 1 = 1$	$4 - 2 = 2$
$3 - 2 = 1$	$4 - 3 = 1$	$5 - 4 = 1$	$5 - 2 = 3$	$5 - 3 = 2$	$5 - 4 = 1$	$5 - 3 = 2$
$5 - 4 = 1$	$4 - 2 = 2$	$5 - 3 = 2$	$4 - 1 = 3$	$5 - 2 = 3$	$4 - 3 = 1$	$5 - 2 = 3$
$4 - 1 = 3$	$4 - 3 = 1$	$3 - 1 = 2$	$3 - 2 = 1$	$2 - 1 = 1$	$5 - 1 = 4$	$5 - 4 = 1$
$5 - 3 = 2$	$3 - 2 = 1$	$5 - 4 = 1$	$5 - 2 = 3$	$4 - 3 = 1$	$5 - 3 = 2$	$4 - 2 = 2$
$2 = 1 + 1$	$2 - 1 = 1$	$3 = 2 + 1$	$3 - 2 = 1$	$3 - 1 = 2$	$4 = 2 + 2$	$4 - 2 = 2$
$5 = 4 + 1$	$5 - 4 = 1$	$5 - 1 = 4$	$5 = 3 + 2$	$5 - 2 = 3$	$5 - 3 = 2$	$5 - 5 = 0$
$2 - 2 = 0$	$5 - 3 = 2$	$5 - 5 = 0$	$4 - 4 = 0$	$4 - 2 = 2$	$3 - 1 = 2$	$5 - 3 = 2$

go to page 26, A

A

Complete:

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

$6 = 5 + 1$	$6 = 1 + 5$	$6 = 4 + 2$	$6 - 4 = 2$	$6 = 2 + 4$	$6 = 3 + 3$	$6 - 3 = 3$
$7 = 6 + 1$	$7 = 1 + 6$	$7 - 6 = 1$	$7 = 5 + 2$	$7 = 2 + 5$	$7 - 5 = 2$	$7 - 2 = 5$
$8 = 7 + 1$	$8 = 1 + 7$	$8 - 1 = 7$	$8 - 7 = 1$	$8 = 6 + 2$	$8 - 6 = 2$	$8 - 2 = 6$
$9 = 8 + 1$	$9 = 1 + 8$	$9 - 1 = 8$	$9 - 8 = 1$	$7 = 4 + 3$	$7 = 3 + 4$	$7 - 3 = 4$
$7 - 4 = 3$	$7 - 3 = 4$	$7 - 5 = 2$	$7 - 5 = 2$	$6 = 3 + 3$	$6 - 3 = 3$	$6 - 5 = 1$
$8 = 2 + 6$	$8 - 2 = 6$	$8 - 6 = 2$	$8 = 5 + 3$	$8 = 3 + 5$	$8 - 3 = 5$	$8 - 5 = 3$
$6 - 4 = 2$	$6 - 2 = 4$	$8 = 4 + 4$	$8 - 4 = 4$	$7 = 4 + 3$	$7 - 4 = 3$	$7 - 3 = 4$
$8 = 3 + 5$	$8 - 3 = 5$	$8 - 5 = 3$	$9 - 8 = 1$	$9 - 1 = 8$	$6 = 3 + 3$	$6 - 3 = 3$
$8 = 4 + 4$	$8 - 4 = 4$	$9 = 8 + 1$	$9 = 1 + 8$	$7 = 5 + 2$	$7 = 2 + 5$	$8 = 5 + 3$
$8 = 5 + 3$	$8 - 5 = 3$	$8 - 3 = 5$	$7 = 4 + 3$	$7 = 3 + 4$	$7 - 4 = 3$	$7 - 5 = 2$

go to B

B

Practice:

$6 - 2 = 4$	$6 - 4 = 2$	$7 - 2 = 5$	$7 - 5 = 2$	$6 - 3 = 3$	$6 - 5 = 1$	$6 - 1 = 5$
$7 - 4 = 3$	$7 - 3 = 4$	$8 - 1 = 7$	$8 - 7 = 1$	$8 - 2 = 6$	$8 - 6 = 2$	$7 - 6 = 1$
$8 - 4 = 4$	$8 - 3 = 5$	$8 - 5 = 3$	$9 - 1 = 8$	$9 - 8 = 1$	$6 - 2 = 4$	$7 - 5 = 2$
$6 - 4 = 2$	$6 - 3 = 3$	$6 - 2 = 4$	$7 - 2 = 5$	$7 - 3 = 4$	$6 - 5 = 1$	$7 - 4 = 3$
$6 - 1 = 5$	$7 - 2 = 5$	$7 - 4 = 3$	$6 - 3 = 3$	$7 - 5 = 2$	$6 - 4 = 2$	$8 - 1 = 7$
$6 - 5 = 1$	$7 - 3 = 4$	$8 - 7 = 1$	$8 - 6 = 2$	$7 - 4 = 3$	$8 - 2 = 6$	$7 - 6 = 1$
$8 - 7 = 1$	$8 - 4 = 4$	$8 - 2 = 6$	$7 - 6 = 1$	$8 - 6 = 2$	$8 - 3 = 5$	$7 - 3 = 4$
$8 - 3 = 5$	$9 - 1 = 8$	$7 - 3 = 4$	$8 - 5 = 3$	$8 - 4 = 4$	$9 - 8 = 1$	$8 - 5 = 3$
$8 - 4 = 4$	$7 - 4 = 3$	$9 - 8 = 1$	$8 - 3 = 5$	$9 - 1 = 8$	$8 - 5 = 3$	$9 - 8 = 1$
$8 - 6 = 2$	$6 - 3 = 3$	$7 - 5 = 2$	$7 - 3 = 4$	$8 - 5 = 3$	$7 - 2 = 5$	$7 - 4 = 3$

go to page 26, C

A $3 - 2 = 1$ $4 - 2 = 2$ $5 - 2 = 3$ $5 - 3 = 2$ $5 - 1 = 4$ $5 - 4 = 1$ $4 - 3 = 1$

6 or 7 correct, go to page 25, A; 5 or less, go to B

B $3 - 1 = 2$ $3 - 2 = 1$ $4 - 1 = 3$ $4 - 3 = 1$ $5 - 2 = 3$ $5 - 3 = 2$ $4 - 2 = 2$
 ...// ...// ...// ...// ...// ...// ...//
 $5 - 1 = 4$ $5 - 4 = 1$ $5 - 2 = 3$ $4 - 2 = 2$ $3 - 1 = 2$ $3 - 2 = 1$ $5 - 2 = 3$
 $3 - 2 = 1$ $4 - 3 = 1$ $5 - 3 = 2$ $5 - 1 = 4$ $5 - 2 = 3$ $5 - 4 = 1$ $5 - 3 = 2$
 $4 - 2 = 2$ $5 - 4 = 1$ $4 - 3 = 1$ $3 - 2 = 1$ $5 - 4 = 1$ $4 - 3 = 1$ $5 - 2 = 3$
 $3 - 2 = 1$ $5 - 3 = 2$ $5 - 2 = 3$ $4 - 3 = 1$ $5 - 3 = 2$ $5 - 4 = 1$ $4 - 2 = 2$
 $5 - 2 = 3$ $5 - 1 = 4$ $5 - 4 = 1$ $5 - 3 = 2$ $4 - 2 = 2$ $5 - 2 = 3$ $5 - 3 = 2$
 $4 - 3 = 1$ $5 - 3 = 2$ $5 - 2 = 3$ $5 - 4 = 1$ $3 - 2 = 1$ $5 - 1 = 4$ $4 - 2 = 2$

go to page 25, A

C $6 - 2 = 4$ $7 - 2 = 5$ $7 - 5 = 2$ $6 - 3 = 3$ $6 - 4 = 2$ $6 - 5 = 1$ $6 - 1 = 5$

6 or 7 correct, go to E; 5 or less, go to D

D $6 = 4 + 2$ $6 = 2 + 4$ $6 - 2 = 4$ $6 - 4 = 2$ $6 = 2 + 4$ $6 - 2 = 4$ $6 - 4 = 2$
 $7 = 2 + 5$ $7 - 2 = 5$ $7 = 5 + 2$ $7 - 5 = 2$ $7 - 2 = 5$ $7 = 5 + 2$ $7 - 5 = 2$
 $6 = 3 + 3$ $6 - 3 = 3$ $6 = 3 + 3$ $6 - 3 = 3$ $6 - 4 = 2$ $6 - 2 = 4$ $7 - 2 = 5$
 $6 = 4 + 2$ $6 = 5 + 1$ $6 - 5 = 1$ $6 = 1 + 5$ $6 - 1 = 5$ $6 - 5 = 1$ $6 - 1 = 5$
 $7 - 2 = 5$ $7 - 5 = 2$ $6 - 4 = 2$ $6 - 2 = 4$ $6 - 5 = 1$ $6 - 1 = 5$ $6 - 3 = 3$
 $6 - 1 = 5$ $6 - 3 = 3$ $6 - 5 = 1$ $6 - 2 = 4$ $7 - 2 = 5$ $6 - 4 = 2$ $7 - 5 = 2$
 $7 - 5 = 2$ $6 - 5 = 1$ $6 - 2 = 4$ $7 - 2 = 5$ $6 - 4 = 2$ $7 - 5 = 2$ $6 - 3 = 3$

go to page 28, A

E $8 - 1 = 7$ $7 - 3 = 4$ $7 - 6 = 1$ $8 - 7 = 1$ $7 - 4 = 3$ $8 - 2 = 6$ $8 - 6 = 2$

6 or 7 correct, go to page 27, B; 5 or less, go to page 27, A

A	$8 = 7 + 1$	$8 - 7 = 1$	$8 - 1 = 7$	$7 = 4 + 3$	$7 - 4 = 3$	$7 = 3 + 4$	$7 - 3 = 4$
	$7 - 4 = 3$	$7 - 3 = 4$	$8 - 7 = 1$	$8 - 1 = 7$	$8 = 6 + 2$	$8 - 6 = 2$	$8 - 2 = 6$
	$7 - 6 = 1$	$7 - 4 = 3$	$8 - 7 = 1$	$7 - 3 = 4$	$8 - 1 = 7$	$8 - 2 = 6$	$7 - 4 = 3$
	$7 - 3 = 4$	$8 - 1 = 7$	$7 - 6 = 1$	$7 - 4 = 3$	$8 - 7 = 1$	$7 - 3 = 4$	$7 - 1 = 6$
	$8 - 6 = 2$	$7 - 4 = 3$	$7 - 3 = 4$	$8 - 2 = 6$	$7 - 3 = 4$	$7 - 4 = 3$	$8 - 6 = 2$
	$7 - 4 = 3$	$8 - 7 = 1$	$8 - 6 = 2$	$8 - 1 = 7$	$7 - 3 = 4$	$8 - 2 = 6$	$7 - 4 = 3$
	$7 - 3 = 4$	$8 - 6 = 2$	$7 - 4 = 3$	$8 - 2 = 6$	$7 - 4 = 3$	$8 - 7 = 1$	$7 - 3 = 4$

go to page 28, C

B	$9 - 1 = 8$	$9 - 8 = 1$	$8 - 5 = 3$	$8 - 2 = 6$	$8 - 4 = 4$	$8 - 7 = 1$	$8 - 3 = 5$
----------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

6 or 7 correct, go to D; 5 or less, go to C

C	$9 = 8 + 1$	$9 = 1 + 8$	$9 - 8 = 1$	$9 - 1 = 8$	$8 = 4 + 4$	$8 - 4 = 4$	$9 - 8 = 1$
	$8 = 5 + 3$	$8 - 5 = 3$	$8 = 3 + 5$	$8 - 3 = 5$	$8 - 7 = 1$	$8 - 2 = 6$	$8 - 3 = 5$
	$8 - 5 = 3$	$9 - 8 = 1$	$8 - 4 = 4$	$9 - 1 = 8$	$8 - 3 = 5$	$9 - 8 = 1$	$8 - 4 = 4$
	$8 - 4 = 4$	$8 - 5 = 3$	$8 - 3 = 5$	$9 - 8 = 1$	$8 - 5 = 3$	$9 - 1 = 8$	$8 - 3 = 5$
	$8 - 5 = 3$	$9 - 1 = 8$	$8 - 4 = 4$	$8 - 3 = 5$	$9 - 8 = 1$	$8 - 5 = 3$	$8 - 4 = 4$
	$8 - 4 = 4$	$8 - 3 = 5$	$9 - 8 = 1$	$9 - 1 = 8$	$8 - 5 = 3$	$8 - 4 = 4$	$8 - 3 = 5$

go to page 30, A

D	$4 + 3 = 7$	$2 + 7 = 9$	$6 + 4 = 10$	$4 + 6 = 10$	$1 + 0 = 1$	$5 + 0 = 5$	$6 + 3 = 9$
	$4 - 2 = 2$	$5 - 3 = 2$	$6 - 3 = 3$	$5 - 2 = 3$	$7 - 5 = 2$	$6 - 4 = 2$	$7 - 3 = 4$
	$7 + 3 = 10$	$3 + 7 = 10$	$6 + 6 = 12$	$6 + 7 = 13$	$8 + 0 = 8$	$8 + 3 = 11$	$9 + 0 = 9$
	$8 - 4 = 4$	$7 - 2 = 5$	$8 - 3 = 5$	$8 - 6 = 2$	$7 - 4 = 3$	$9 - 8 = 1$	$8 - 5 = 3$

go to page 29, A

A $6 - 1 = 5$ $6 - 5 = 1$ $7 - 2 = 5$ $6 - 4 = 2$ $7 - 5 = 2$ $6 - 3 = 3$ $6 - 2 = 4$
 6 or 7 correct, go to page 26, E; 5 or less, go to B

B ***** $6 - 4 = 2$ $6 = 4 + 2$ $6 = 2 + 4$ $6 - 2 = 4$ $6 - 5 = 1$ $6 - 1 = 5$
 ***** $7 = 5 + 2$ $7 - 5 = 2$ $7 = 2 + 5$ $7 - 2 = 5$ $7 - 5 = 2$ $7 - 2 = 5$
 $6 = 3 + 3$ $6 - 3 = 3$ $6 = 2 + 4$ $6 - 2 = 4$ $6 = 4 + 2$ $6 - 4 = 2$ $6 - 3 = 3$
 $6 = 5 + 1$ $6 - 5 = 1$ $6 = 1 + 5$ $6 - 1 = 5$ $6 - 5 = 1$ $6 - 3 = 3$ $6 - 1 = 5$
 $6 - 4 = 2$ $6 - 2 = 4$ $6 - 1 = 5$ $6 - 5 = 1$ $6 - 3 = 3$ $7 = 5 + 2$ $7 - 5 = 2$
 $7 = 2 + 5$ $7 - 2 = 5$ $7 = 5 + 2$ $7 - 5 = 2$ $7 - 2 = 5$ $7 - 5 = 2$ $6 - 3 = 3$
 $6 - 1 = 5$ $6 - 3 = 3$ $7 - 2 = 5$ $6 - 4 = 2$ $6 - 5 = 1$ $6 - 2 = 4$ $7 - 5 = 2$
 $7 - 5 = 2$ $6 - 2 = 4$ $6 - 5 = 1$ $6 - 3 = 3$ $6 - 1 = 5$ $6 - 4 = 2$ $7 - 2 = 5$
 go to page 26, E

C $7 - 6 = 1$ $8 - 1 = 7$ $7 - 4 = 3$ $8 - 2 = 6$ $8 - 6 = 2$ $8 - 7 = 1$ $7 - 3 = 4$
 6 or 7 correct, go to page 27, B; 5 or less, go to D

D ***** $7 = 6 + 1$ $7 = 1 + 6$ $7 - 1 = 6$ $7 - 6 = 1$ $7 = 4 + 3$ $7 = 3 + 4$
 $7 - 4 = 3$ $7 - 3 = 4$ $7 - 1 = 6$ $7 - 6 = 1$ $7 - 3 = 4$ $7 - 6 = 1$ $7 - 4 = 3$
 ***** $8 = 6 + 2$ $8 - 6 = 2$ $8 = 2 + 6$ $8 - 2 = 6$ $8 - 1 = 7$ $8 - 7 = 1$
 $8 - 6 = 2$ $8 - 2 = 6$ $7 - 4 = 3$ $7 - 3 = 4$ $7 - 6 = 1$ $7 - 1 = 6$ $8 - 6 = 2$
 $7 - 3 = 4$ $7 - 6 = 1$ $8 - 1 = 7$ $7 - 4 = 3$ $8 - 2 = 6$ $7 - 3 = 4$ $7 - 6 = 1$
 $7 - 4 = 3$ $8 - 2 = 6$ $7 - 3 = 4$ $8 - 7 = 1$ $7 - 4 = 3$ $8 - 6 = 2$ $7 - 4 = 3$
 $7 - 6 = 1$ $7 - 3 = 4$ $8 - 1 = 7$ $7 - 4 = 3$ $8 - 2 = 6$ $7 - 3 = 4$ $8 - 1 = 7$
 $8 - 2 = 6$ $7 - 4 = 3$ $7 - 3 = 4$ $8 - 6 = 2$ $7 - 3 = 4$ $8 - 2 = 6$ $7 - 4 = 3$
 $7 - 3 = 4$ $7 - 5 = 2$ $8 - 2 = 6$ $7 - 4 = 3$ $7 - 6 = 1$ $8 - 7 = 1$ $8 - 6 = 2$
 go to page 27, B

A Take away —


$$4 - 4 = 0$$



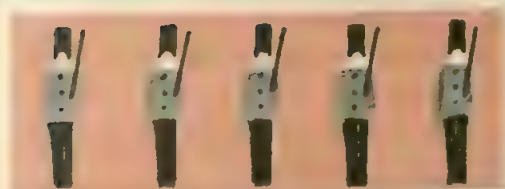
$$4 - 0 = 4$$



$$6 - 6 = 0$$



$$6 - 0 = 6$$



$$5 - 0 = 5$$



$$8 - 0 = 8$$

go to B

B

Practice:

$1 - 1 = 0$

$1 - 0 = 1$

$2 - 2 = 0$

$2 - 1 = 1$

$2 - 0 = 2$

$4 - 0 = 4$

$4 - 4 = 0$

$3 - 2 = 1$

$3 - 0 = 3$

$3 - 3 = 0$

$1 - 0 = 1$

$6 - 0 = 6$

$6 - 6 = 0$

$5 - 5 = 0$

$2 - 0 = 2$

$4 - 0 = 4$

$2 - 2 = 0$

$5 - 5 = 0$

$4 - 4 = 0$

$3 - 0 = 3$

$3 - 3 = 0$

$6 - 6 = 0$

$5 - 5 = 0$

$6 - 0 = 6$

$4 - 0 = 4$

$7 - 0 = 7$

$7 - 7 = 0$

$6 - 6 = 0$

$8 - 0 = 8$

$7 - 0 = 7$

$7 - 7 = 0$

$8 - 8 = 0$

$9 - 9 = 0$

$9 - 0 = 9$

$8 - 0 = 8$

$7 - 0 = 7$

$9 - 9 = 0$

$9 - 0 = 9$

$8 - 0 = 8$

$5 - 5 = 0$

$7 - 0 = 7$

$6 - 0 = 6$

go to page 30, C

A $8 - 6 = 2$ $9 - 1 = 8$ $8 - 3 = 5$ $8 - 5 = 3$ $9 - 8 = 1$ $8 - 2 = 6$ $8 - 4 = 4$
 6 or 7 correct, go to page 29, A; 5 or less, go to B

B

$9 = 1 + 8$	$9 - 1 = 8$	$9 = 8 + 1$	$9 - 8 = 1$	$8 = 3 + 5$	$8 - 3 = 5$	$8 - 5 = 3$
$8 = 5 + 3$	$8 - 5 = 3$	$8 - 3 = 5$	$9 - 1 = 8$	$8 = 4 + 4$	$8 - 4 = 4$	$9 - 8 = 1$
$8 - 5 = 3$	$9 - 1 = 8$	$8 - 5 = 3$	$9 - 8 = 1$	$8 - 3 = 5$	$8 - 5 = 3$	$8 - 4 = 4$
$9 - 8 = 1$	$8 - 5 = 3$	$8 - 4 = 4$	$9 - 9 = 0$	$8 - 5 = 3$	$9 - 8 = 1$	$8 - 3 = 5$
$8 - 3 = 5$	$8 - 8 = 0$	$8 - 0 = 8$	$8 - 5 = 3$	$9 - 8 = 1$	$8 - 4 = 4$	$8 - 5 = 3$
$8 - 4 = 4$	$8 - 5 = 3$	$8 - 3 = 5$	$9 - 1 = 8$	$8 - 4 = 4$	$8 - 3 = 5$	$9 - 0 = 9$
$8 - 6 = 2$	$9 - 8 = 1$	$8 - 5 = 3$	$8 - 6 = 2$	$8 - 3 = 5$	$8 - 5 = 3$	$8 - 4 = 4$
$8 - 2 = 6$	$8 - 3 = 5$	$8 - 4 = 4$	$8 - 5 = 3$	$8 - 4 = 4$	$8 - 3 = 5$	$8 - 5 = 3$

go to page 29, A

C

$1 - 1 = 0$	$1 - 0 = 1$	$2 - 0 = 2$	$2 - 2 = 0$	$6 - 0 = 6$	$4 - 0 = 4$	$6 - 6 = 0$
$7 - 7 = 0$	$8 - 8 = 0$	$7 - 0 = 7$	$9 - 0 = 9$	$4 - 4 = 0$	$5 - 0 = 5$	$9 - 9 = 0$

12, 13 or 14 correct, go to page 31, A; 11 or less, go to D

D

$1 - 1 = 0$	$1 - 0 = 1$	$2 - 2 = 0$	$2 - 0 = 2$	$6 - 0 = 6$	$6 - 6 = 0$	$4 - 0 = 4$
$2 - 0 = 2$	$4 - 0 = 4$	$3 - 0 = 3$	$2 - 2 = 0$	$3 - 3 = 0$	$4 - 4 = 0$	$1 - 0 = 1$
$2 - 2 = 0$	$1 - 1 = 0$	$6 - 6 = 0$	$6 - 0 = 6$	$2 - 0 = 2$	$6 - 6 = 0$	$2 - 2 = 0$
$4 - 0 = 4$	$2 - 0 = 2$	$4 - 0 = 4$	$2 - 0 = 2$	$1 - 1 = 0$	$6 - 0 = 6$	$4 - 0 = 4$
$3 - 3 = 0$	$6 - 6 = 0$	$2 - 2 = 0$	$6 - 0 = 6$	$4 - 0 = 4$	$4 - 4 = 0$	$2 - 0 = 2$
$5 - 0 = 5$	$5 - 5 = 0$	$7 - 7 = 0$	$7 - 0 = 7$	$9 - 0 = 9$	$9 - 9 = 0$	$8 - 8 = 0$
$7 - 0 = 7$	$8 - 0 = 8$	$9 - 9 = 0$	$8 - 8 = 0$	$6 - 6 = 0$	$5 - 0 = 5$	$9 - 0 = 9$
$3 - 3 = 0$	$4 - 0 = 4$	$7 - 0 = 7$	$5 - 5 = 0$	$8 - 0 = 8$	$9 - 0 = 9$	$7 - 7 = 0$

go to page 32, A

A Complete:

$2 = 1 + 1$	$2 - 1 = 1$	$2 = 2 + 0$	$2 - 2 = 0$	$2 - 0 = 2$	$3 = 2 + 1$	$3 - 2 = 1$
$3 = 1 + 2$	$3 - 1 = 2$	$3 - 3 = 0$	$3 - 0 = 3$	$4 = 2 + 2$	$4 - 2 = 2$	$4 = 3 + 1$
$4 - 3 = 1$	$4 - 1 = 3$	$5 = 3 + 2$	$5 - 2 = 3$	$5 - 3 = 2$	$5 - 4 = 1$	$5 - 2 = 3$
$6 = 4 + 2$	$6 = 3 + 3$	$6 = 1 + 5$	$6 = 5 + 1$	$6 - 3 = 3$	$7 = 5 + 2$	$7 = 3 + 4$
$7 - 4 = 3$	$7 - 3 = 4$	$7 - 5 = 2$	$7 = 2 + 5$	$8 = 5 + 3$	$8 = 4 + 4$	$8 - 3 = 5$
$9 = 9 + 0$	$7 - 0 = 7$	$7 - 7 = 0$	$5 - 5 = 0$	$5 - 0 = 5$	$8 - 2 = 6$	$8 = 6 + 2$
$2 - 2 = 0$	$3 - 0 = 3$	$8 - 5 = 3$	$8 - 3 = 5$	$9 - 9 = 0$	$9 - 0 = 9$	$6 - 3 = 3$
$7 = 5 + 2$	$7 - 2 = 5$	$7 - 3 = 4$	$8 = 4 + 4$	$8 - 6 = 2$	$7 = 4 + 3$	$8 - 8 = 0$

go to B

B Revision:

$2 - 1 = 1$	$2 - 2 = 0$	$2 - 0 = 2$	$3 - 0 = 3$	$3 - 3 = 0$	$4 - 4 = 0$	$5 - 5 = 0$
$3 - 2 = 1$	$4 - 2 = 2$	$4 - 3 = 1$	$4 - 1 = 3$	$5 - 2 = 3$	$5 - 3 = 2$	$6 - 6 = 0$
$7 - 0 = 7$	$6 - 4 = 2$	$6 - 2 = 4$	$6 - 3 = 3$	$4 - 2 = 2$	$8 - 4 = 4$	$5 - 2 = 3$
$8 - 8 = 0$	$6 - 3 = 3$	$7 - 6 = 1$	$5 - 3 = 2$	$7 - 5 = 2$	$7 - 2 = 5$	$6 - 3 = 3$
$5 - 3 = 2$	$5 - 5 = 0$	$6 - 4 = 2$	$4 - 0 = 4$	$5 - 2 = 3$	$6 - 0 = 6$	$7 - 6 = 1$
$4 - 2 = 2$	$7 - 7 = 0$	$4 - 4 = 0$	$6 - 3 = 3$	$3 - 0 = 3$	$6 - 2 = 4$	$7 - 5 = 2$
$6 - 4 = 2$	$7 - 6 = 1$	$7 - 2 = 5$	$7 - 5 = 2$	$5 - 3 = 2$	$7 - 1 = 6$	$7 - 4 = 3$
$5 - 2 = 3$	$7 - 3 = 4$	$7 - 4 = 3$	$7 - 6 = 1$	$7 - 2 = 5$	$6 - 3 = 3$	$7 - 3 = 4$
$8 - 0 = 8$	$6 - 2 = 4$	$8 - 6 = 2$	$8 - 2 = 6$	$7 - 1 = 6$	$7 - 5 = 2$	$8 - 6 = 2$
$7 - 3 = 4$	$8 - 2 = 6$	$9 - 1 = 8$	$7 - 4 = 3$	$8 - 6 = 2$	$8 - 2 = 6$	$9 - 0 = 9$
$9 - 8 = 1$	$7 - 4 = 3$	$8 - 4 = 4$	$9 - 9 = 0$	$8 - 7 = 1$	$8 - 5 = 3$	$8 - 1 = 7$
$8 - 5 = 3$	$8 - 3 = 5$	$8 - 0 = 8$	$8 - 4 = 4$	$8 - 3 = 5$	$9 - 0 = 9$	$8 - 5 = 3$
$9 - 1 = 8$	$9 - 0 = 9$	$7 - 3 = 4$	$8 - 5 = 3$	$6 - 6 = 0$	$6 - 3 = 3$	$8 - 0 = 8$

go to page 33, A

A $1 - 0 = 1$ $1 - 1 = 0$ $2 - 2 = 0$ $4 - 4 = 0$ $4 - 0 = 4$ $2 - 0 = 2$ $3 - 3 = 0$
 $7 - 7 = 0$ $7 - 0 = 7$ $9 - 0 = 9$ $5 - 0 = 5$ $6 - 6 = 0$ $8 - 0 = 8$ $9 - 9 = 0$

12, 13 or 14 correct, go to page 31, A; 11 or less, go to B

B



$$2 - 2 = 0$$



$$3 - 0 = 3$$



$$3 - 3 = 0$$



$$1 - 0 = 1$$



$$1 - 1 = 0$$



$$5 - 0 = 5$$



$$5 - 5 = 0$$

$2 - 1 = 1$	$2 - 0 = 2$	$2 - 2 = 0$	$3 - 1 = 2$	$3 - 2 = 1$	$3 - 3 = 0$	$3 - 0 = 3$
$4 - 1 = 3$	$4 - 3 = 1$	$4 - 0 = 4$	$4 - 4 = 0$	$5 - 2 = 3$	$5 - 3 = 2$	$5 - 0 = 5$
$5 - 5 = 0$	$6 - 6 = 0$	$7 - 7 = 0$	$8 - 8 = 0$	$9 - 9 = 0$	$10 - 10 = 0$	$10 - 1 = 9$
$4 - 0 = 4$	$6 - 0 = 6$	$5 - 0 = 5$	$9 - 0 = 9$	$9 - 9 = 0$	$8 - 0 = 8$	$7 - 0 = 7$
$6 - 6 = 0$	$7 - 0 = 7$	$8 - 0 = 8$	$9 - 9 = 0$	$8 - 8 = 0$	$5 - 0 = 5$	$4 - 4 = 0$
$2 - 2 = 0$	$3 - 0 = 3$	$1 - 1 = 0$	$6 - 6 = 0$	$9 - 0 = 9$	$4 - 0 = 4$	$7 - 7 = 0$
$1 - 0 = 1$	$4 - 4 = 0$	$4 - 0 = 4$	$2 - 2 = 0$	$3 - 3 = 0$	$6 - 0 = 6$	$5 - 0 = 5$
$3 - 0 = 3$	$8 - 0 = 8$	$5 - 5 = 0$	$7 - 7 = 0$	$9 - 0 = 9$	$1 - 1 = 0$	$7 - 0 = 7$
$8 - 8 = 0$	$4 - 0 = 4$	$7 - 0 = 7$	$5 - 0 = 5$	$6 - 6 = 0$	$8 - 0 = 8$	$9 - 9 = 0$

go to page 31, A

A	$3 - 1 = 2$	$3 - 0 = 3$	$4 - 2 = 2$	$6 - 6 = 0$	$7 - 4 = 3$	$5 - 3 = 2$	$8 - 4 = 4$
	$9 - 1 = 8$	$7 - 7 = 0$	$8 - 6 = 2$	$8 - 0 = 8$	$7 - 2 = 5$	$8 - 5 = 3$	$9 - 9 = 0$

12, 13 or 14 correct, go to C; 11 or less, go to B

B	$1 - 1 = 0$	$1 - 0 = 1$	$2 - 2 = 0$	$2 - 0 = 2$	$3 - 1 = 2$	$3 - 2 = 1$	$4 - 0 = 4$
	$4 - 4 = 0$	$5 - 2 = 3$	$5 - 3 = 2$	$6 - 4 = 2$	$6 - 2 = 4$	$5 - 4 = 1$	$5 - 1 = 4$
	$6 - 6 = 0$	$6 - 0 = 6$	$7 - 5 = 2$	$7 - 2 = 5$	$6 - 3 = 3$	$7 - 4 = 3$	$7 - 3 = 4$
	$4 - 3 = 1$	$6 - 3 = 3$	$5 - 2 = 3$	$6 - 4 = 2$	$7 - 2 = 5$	$5 - 3 = 2$	$6 - 2 = 4$
	$5 - 2 = 3$	$7 - 5 = 2$	$8 - 1 = 7$	$6 - 3 = 3$	$7 - 4 = 3$	$8 - 8 = 0$	$6 - 4 = 2$
	$6 - 3 = 3$	$7 - 4 = 3$	$5 - 3 = 2$	$8 - 2 = 6$	$8 - 6 = 2$	$9 - 0 = 9$	$7 - 3 = 4$
	$5 - 3 = 2$	$6 - 2 = 4$	$8 - 6 = 2$	$9 - 1 = 8$	$5 - 2 = 3$	$8 - 3 = 5$	$8 - 5 = 3$
	$6 - 4 = 2$	$8 - 2 = 6$	$7 - 3 = 4$	$8 - 3 = 5$	$9 - 8 = 1$	$7 - 0 = 7$	$9 - 9 = 0$
	$7 - 2 = 5$	$8 - 5 = 3$	$8 - 4 = 4$	$9 - 1 = 8$	$8 - 4 = 4$	$8 - 5 = 3$	$9 - 8 = 1$

go to page 34, A

C Revision:

$5 + 3 = 8$	$3 + 5 = 8$	$4 + 7 = 11$	$2 + 5 = 7$	$6 + 2 = 8$	$2 + 6 = 8$	$6 + 3 = 9$
$3 + 7 = 10$	$6 + 4 = 10$	$4 + 6 = 10$	$7 + 0 = 7$	$3 + 6 = 9$	$6 + 5 = 11$	$5 + 6 = 11$
$4 + 6 = 10$	$6 + 6 = 12$	$5 + 5 = 10$	$8 + 1 = 9$	$5 + 6 = 11$	$7 + 5 = 12$	$5 + 7 = 12$
$8 + 2 = 10$	$9 + 0 = 9$	$8 + 3 = 11$	$5 + 7 = 12$	$6 + 6 = 12$	$7 + 4 = 11$	$3 + 6 = 9$
$5 + 7 = 12$	$6 + 4 = 10$	$4 + 5 = 9$	$8 + 2 = 10$	$5 + 4 = 9$	$8 + 3 = 11$	$2 + 6 = 8$
$2 + 7 = 9$	$0 + 5 = 5$	$8 + 0 = 8$	$8 + 4 = 12$	$0 + 6 = 6$	$7 + 6 = 13$	$6 + 7 = 13$
$7 + 6 = 13$	$6 + 7 = 13$	$7 + 2 = 9$	$4 + 5 = 9$	$6 + 7 = 13$	$8 + 4 = 12$	$2 + 7 = 9$
$7 + 3 = 10$	$9 + 3 = 12$	$10 + 2 = 12$	$9 + 2 = 11$	$10 + 3 = 13$	$9 + 4 = 13$	$10 + 5 = 15$
$10 + 4 = 14$	$8 + 5 = 13$	$9 + 4 = 13$	$10 + 6 = 16$	$7 + 7 = 14$	$8 + 4 = 12$	$9 + 3 = 12$

go to page 34, C

A	$3 - 2 = 1$	$2 - 2 = 0$	$4 - 0 = 4$	$5 - 5 = 0$	$5 - 2 = 3$	$3 - 0 = 3$	$6 - 3 = 3$
	$9 - 0 = 9$	$6 - 4 = 2$	$8 - 3 = 5$	$9 - 9 = 0$	$7 - 5 = 2$	$7 - 3 = 4$	$8 - 5 = 3$

12, 13 or 14 correct, go to page 33, C; 11 or less, go to B

B	$4 = 4 + 0$	$4 = 0 + 4$	$4 - 0 = 4$	$4 - 4 = 0$	$5 - 5 = 0$	$5 - 0 = 5$	$4 - 2 = 2$
	$5 = 3 + 2$	$5 - 3 = 2$	$5 = 2 + 3$	$5 - 2 = 3$	$6 = 3 + 3$	$6 - 3 = 3$	$4 - 3 = 1$
	$6 - 4 = 2$	$6 - 2 = 4$	$3 - 3 = 0$	$6 - 6 = 0$	$6 - 0 = 6$	$7 - 5 = 2$	$7 - 2 = 5$
	$4 - 2 = 2$	$5 - 4 = 1$	$6 - 3 = 3$	$5 - 3 = 2$	$7 - 0 = 7$	$5 - 2 = 3$	$7 - 4 = 3$
	$8 - 7 = 1$	$8 - 1 = 7$	$9 - 1 = 8$	$8 - 5 = 3$	$8 - 6 = 2$	$8 - 2 = 6$	$8 - 3 = 5$
	$7 - 3 = 4$	$7 - 4 = 3$	$8 - 3 = 5$	$7 - 2 = 5$	$9 - 9 = 0$	$8 - 0 = 8$	$9 - 1 = 8$
	$8 - 5 = 3$	$8 - 4 = 4$	$7 - 3 = 4$	$7 - 6 = 1$	$7 - 1 = 6$	$7 - 4 = 3$	$8 - 6 = 2$
	$7 - 2 = 5$	$6 - 4 = 2$	$8 - 3 = 5$	$7 - 4 = 3$	$5 - 5 = 0$	$6 - 0 = 6$	$9 - 9 = 0$

go to page 33, C

C	$6 + 1 = 7$	$3 + 4 = 7$	$5 + 2 = 7$	$2 + 5 = 7$	$4 + 7 = 11$	$0 + 2 = 2$	$7 + 4 = 11$
	$8 + 0 = 8$	$4 + 5 = 9$	$5 + 7 = 12$	$8 + 5 = 13$	$7 + 6 = 13$	$10 + 6 = 16$	$9 + 5 = 14$

12, 13 or 14 correct, go to page 35, B; 11 or less, go to D

D	$3 + 1 = 4$	$3 + 2 = 5$	$2 + 3 = 5$	$4 + 3 = 7$	$3 + 4 = 7$	$5 + 0 = 5$	$0 + 5 = 5$
	$4 + 3 = 7$	$4 + 2 = 6$	$5 + 3 = 8$	$3 + 5 = 8$	$4 + 4 = 8$	$5 + 5 = 10$	$6 + 2 = 8$
	$5 + 2 = 7$	$2 + 5 = 7$	$6 + 3 = 9$	$3 + 6 = 9$	$7 + 2 = 9$	$2 + 6 = 8$	$8 + 2 = 10$
	$7 + 3 = 10$	$3 + 7 = 10$	$4 + 7 = 11$	$8 + 4 = 12$	$4 + 8 = 12$	$3 + 8 = 11$	$6 + 4 = 10$
	$5 + 7 = 12$	$6 + 5 = 11$	$4 + 6 = 10$	$7 + 4 = 11$	$9 + 2 = 11$	$2 + 9 = 11$	$0 + 6 = 6$
	$8 + 3 = 11$	$4 + 5 = 9$	$7 + 6 = 13$	$6 + 7 = 13$	$8 + 5 = 13$	$8 + 7 = 15$	$9 + 5 = 14$
	$3 + 4 = 7$	$5 + 3 = 8$	$5 + 7 = 12$	$9 + 2 = 11$	$4 + 7 = 11$	$5 + 9 = 14$	$7 + 8 = 15$

go to page 36, A

A	$3 + 0 = 3$	$0 + 3 = 3$	$3 + 2 = 5$	$2 + 3 = 5$	$5 + 2 = 7$	$2 + 5 = 7$	$3 + 3 = 6$
	$4 + 2 = 6$	$2 + 4 = 6$	$4 + 3 = 7$	$1 + 5 = 6$	$2 + 6 = 8$	$0 + 4 = 4$	$8 + 0 = 8$
	$2 + 5 = 7$	$3 + 4 = 7$	$6 + 4 = 10$	$4 + 6 = 10$	$7 + 2 = 9$	$2 + 7 = 9$	$3 + 6 = 9$
	$7 + 3 = 10$	$3 + 7 = 10$	$2 + 6 = 8$	$7 + 4 = 11$	$4 + 7 = 11$	$0 + 6 = 6$	$4 + 7 = 11$
	$3 + 6 = 9$	$9 + 0 = 9$	$4 + 7 = 11$	$0 + 5 = 5$	$0 + 0 = 0$	$3 + 7 = 10$	$4 + 5 = 9$
	$4 + 5 = 9$	$6 + 6 = 12$	$3 + 7 = 10$	$5 + 7 = 12$	$5 + 6 = 11$	$4 + 7 = 11$	$8 + 2 = 10$
	$5 + 6 = 11$	$7 + 5 = 12$	$7 + 6 = 13$	$6 + 7 = 13$	$5 + 7 = 12$	$6 + 6 = 12$	$6 + 7 = 13$
	$7 + 6 = 13$	$10 + 1 = 11$	$10 + 0 = 10$	$0 + 8 = 8$	$9 + 1 = 10$	$6 + 7 = 13$	$9 + 2 = 11$
	$10 + 3 = 13$	$4 + 6 = 10$	$8 + 3 = 11$	$7 + 6 = 13$	$8 + 5 = 13$	$8 + 4 = 12$	$10 + 5 = 15$
	$9 + 3 = 12$	$6 + 7 = 13$	$8 + 4 = 12$	$9 + 4 = 13$	$8 + 3 = 11$	$9 + 3 = 12$	$8 + 5 = 13$

go to B

B Practice:

1	2	3	4	5	6	7	8	9	10	11	12
---	---	---	---	---	---	---	---	---	----	----	----

$9 - 2 = 7$	$9 - 7 = 2$	$9 - 3 = 6$	$9 - 6 = 3$	$10 - 1 = 9$	$10 - 9 = 1$	$10 - 5 = 5$
$9 - 4 = 5$	$9 - 5 = 4$	$11 - 2 = 9$	$11 - 9 = 2$	$10 - 6 = 4$	$10 - 2 = 8$	$10 - 4 = 6$
$11 - 3 = 8$	$11 - 8 = 3$	$10 - 8 = 2$	$10 - 3 = 7$	$10 - 7 = 3$	$11 - 4 = 7$	$11 - 7 = 4$
$12 - 9 = 3$	$12 - 3 = 9$	$9 - 6 = 3$	$9 - 2 = 7$	$10 - 4 = 6$	$9 - 7 = 2$	$10 - 3 = 7$
$9 - 3 = 6$	$9 - 7 = 2$	$10 - 2 = 8$	$11 - 2 = 9$	$11 - 9 = 2$	$11 - 3 = 8$	$11 - 8 = 3$
$11 - 5 = 6$	$11 - 6 = 5$	$11 - 5 = 6$	$12 - 3 = 9$	$12 - 9 = 3$	$9 - 4 = 5$	$9 - 5 = 4$
$9 - 4 = 5$	$10 - 7 = 3$	$11 - 4 = 7$	$11 - 7 = 4$	$9 - 5 = 4$	$11 - 6 = 5$	$12 - 6 = 6$
$12 - 4 = 8$	$12 - 8 = 4$	$12 - 4 = 8$	$12 - 6 = 6$	$12 - 8 = 4$	$10 - 6 = 4$	$9 - 0 = 9$
$12 - 7 = 5$	$12 - 5 = 7$	$12 - 7 = 5$	$12 - 8 = 4$	$12 - 5 = 7$	$11 - 7 = 4$	$12 - 4 = 8$
$9 - 9 = 0$	$9 - 6 = 3$	$11 - 7 = 4$	$8 - 0 = 8$	$11 - 8 = 3$	$10 - 4 = 6$	$12 - 5 = 7$

go to page 36, B

A	$6 + 0 = 6$	$7 + 2 = 9$	$2 + 7 = 9$	$3 + 4 = 7$	$5 + 3 = 8$	$10 + 2 = 12$	$10 + 0 = 10$
	$8 + 4 = 12$	$5 + 6 = 11$	$7 + 7 = 14$	$9 + 3 = 12$	$10 + 6 = 16$	$7 + 6 = 13$	$9 + 4 = 13$

12, 13 or 14 correct, go to page 35, B; 11 or less, go to page 35, A

B	$9 - 2 = 7$	$9 - 3 = 6$	$9 - 6 = 3$	$10 - 1 = 9$	$9 - 7 = 2$	$10 - 5 = 5$	$10 - 9 = 1$
----------	-------------	-------------	-------------	--------------	-------------	--------------	--------------

6 or 7 correct, go to D; 5 or less, go to C

C	$10 - 1 = 9$	$10 - 5 = 5$	$9 - 2 = 7$	$9 - 7 = 2$	$9 - 2 = 7$	$10 - 1 = 9$	$10 - 9 = 1$
	$9 - 3 = 6$	$9 - 6 = 3$	$9 - 3 = 6$	$10 - 9 = 1$	$9 - 7 = 2$	$9 - 2 = 7$	$9 - 6 = 3$
	$9 - 7 = 2$	$9 - 2 = 7$	$10 - 5 = 5$	$10 - 1 = 9$	$10 - 9 = 1$	$9 - 6 = 3$	$9 - 3 = 6$
	$9 - 6 = 3$	$9 - 7 = 2$	$9 - 6 = 3$	$9 - 7 = 2$	$9 - 2 = 7$	$9 - 2 = 7$	$10 - 5 = 5$
	$9 - 2 = 7$	$9 - 3 = 6$	$9 - 2 = 7$	$9 - 6 = 3$	$10 - 1 = 9$	$9 - 7 = 2$	$9 - 7 = 2$
	$9 - 7 = 2$	$9 - 6 = 3$	$9 - 3 = 6$	$10 - 5 = 5$	$9 - 2 = 7$	$10 - 9 = 1$	$9 - 6 = 3$
	$9 - 2 = 7$	$10 - 2 = 8$	$9 - 6 = 3$	$9 - 7 = 2$	$10 - 9 = 1$	$9 - 3 = 6$	$10 - 6 = 4$

go to page 38, A

D	$10 - 3 = 7$	$9 - 4 = 5$	$9 - 5 = 4$	$10 - 7 = 3$	$9 - 3 = 6$	$11 - 9 = 2$	$11 - 2 = 9$
----------	--------------	-------------	-------------	--------------	-------------	--------------	--------------

6 or 7 correct, go to page 37, A; 5 or less, go to E

E	$9 = 4 + 5$	$9 = 5 + 4$	$9 - 5 = 4$	$9 - 4 = 5$	$10 = 7 + 3$	$11 = 9 + 2$	$11 - 9 = 2$
	$10 - 3 = 7$	$10 - 7 = 3$	$10 - 3 = 7$	$10 - 7 = 3$	$11 - 9 = 2$	$11 - 2 = 9$	$11 - 2 = 9$
	$11 - 9 = 2$	$10 - 3 = 7$	$9 - 4 = 5$	$9 - 4 = 5$	$9 - 5 = 4$	$9 - 5 = 4$	$10 - 7 = 3$
	$9 - 4 = 5$	$9 - 5 = 4$	$9 - 5 = 4$	$10 - 3 = 7$	$10 - 7 = 3$	$11 - 9 = 2$	$11 - 9 = 2$
	$11 - 2 = 9$	$11 - 2 = 9$	$10 - 7 = 3$	$9 - 4 = 5$	$9 - 5 = 4$	$11 - 2 = 9$	$9 - 5 = 4$
	$10 - 3 = 7$	$9 - 4 = 5$	$11 - 2 = 9$	$9 - 5 = 4$	$11 - 9 = 2$	$10 - 7 = 3$	$9 - 3 = 6$
	$11 - 2 = 9$	$10 - 7 = 3$	$9 - 4 = 5$	$9 - 3 = 6$	$10 - 3 = 7$	$9 - 5 = 4$	$11 - 9 = 2$

go to page 38, C

A $9 - 8 = 1$ $11 - 8 = 3$ $11 - 3 = 8$ $10 - 6 = 4$ $11 - 6 = 5$ $11 - 5 = 6$ $10 - 4 = 6$
 6 or 7 correct, go to C; 5 or less, go to B

B $11 = 8 + 3$ $11 = 3 + 8$ $10 = 6 + 4$ $10 = 4 + 6$ $10 - 4 = 6$ $11 = 6 + 5$ $11 = 5 + 6$
 $10 - 6 = 4$ $11 - 6 = 5$ $11 - 6 = 5$ $11 - 5 = 6$ $11 - 5 = 6$ $11 - 6 = 5$ $10 - 6 = 4$
 $11 - 6 = 5$ $11 - 5 = 6$ $10 - 6 = 4$ $10 - 6 = 4$ $10 - 4 = 6$ $10 - 4 = 6$ $9 - 8 = 1$
 $11 - 8 = 3$ $11 - 8 = 3$ $11 - 3 = 8$ $11 - 8 = 3$ $11 - 3 = 8$ $11 - 3 = 8$ $11 - 8 = 3$
 $10 - 4 = 6$ $10 - 6 = 4$ $11 - 5 = 6$ $11 - 6 = 5$ $9 - 6 = 3$ $11 - 8 = 3$ $11 - 3 = 8$
 $9 - 8 = 1$ $11 - 3 = 8$ $10 - 6 = 4$ $11 - 5 = 6$ $11 - 8 = 3$ $10 - 4 = 6$ $11 - 6 = 5$
 $11 - 3 = 8$ $10 - 6 = 4$ $11 - 5 = 6$ $11 - 8 = 3$ $11 - 6 = 5$ $11 - 8 = 3$ $11 - 5 = 6$
 go to page 38, E

C $12 - 9 = 3$ $12 - 3 = 9$ $11 - 7 = 4$ $12 - 6 = 6$ $11 - 4 = 7$ $12 - 4 = 8$ $12 - 8 = 4$
 6 or 7 correct, go to page 39, C; 5 or less, go to D

D $12 - 9 = 3$ $12 - 9 = 3$ $12 - 3 = 9$ $12 - 9 = 3$ $12 - 8 = 4$ $12 - 8 = 4$ $12 - 4 = 8$
 $12 - 4 = 8$ $12 - 4 = 8$ $12 - 8 = 4$ $12 - 7 = 5$ $12 - 7 = 5$ $12 - 5 = 7$ $12 - 5 = 7$
 $12 - 7 = 5$ $12 - 6 = 6$ $12 - 5 = 7$ $12 - 5 = 7$ $12 - 9 = 3$ $12 - 3 = 9$ $12 - 6 = 6$
 $11 - 7 = 4$ $11 - 7 = 4$ $11 - 4 = 7$ $11 - 4 = 7$ $11 - 7 = 4$ $11 - 4 = 7$ $11 - 7 = 4$
 $12 - 4 = 8$ $12 - 3 = 9$ $12 - 8 = 4$ $12 - 6 = 6$ $12 - 5 = 7$ $11 - 7 = 4$ $12 - 9 = 3$
 $12 - 5 = 7$ $12 - 9 = 3$ $11 - 7 = 4$ $12 - 3 = 9$ $11 - 4 = 7$ $12 - 8 = 4$ $12 - 7 = 5$
 $11 - 7 = 4$ $12 - 3 = 9$ $12 - 4 = 8$ $12 - 9 = 3$ $12 - 6 = 6$ $12 - 4 = 8$ $11 - 7 = 4$
 $12 - 8 = 4$ $11 - 4 = 7$ $12 - 3 = 9$ $12 - 8 = 4$ $12 - 9 = 3$ $11 - 4 = 7$ $12 - 6 = 6$
 $11 - 4 = 7$ $12 - 8 = 4$ $12 - 4 = 8$ $11 - 7 = 4$ $12 - 6 = 6$ $11 - 8 = 3$ $12 - 8 = 4$
 $12 - 9 = 3$ $11 - 7 = 4$ $12 - 6 = 6$ $12 - 9 = 3$ $11 - 4 = 7$ $12 - 8 = 4$ $12 - 3 = 9$
 go to page 38, F

A $10 - 1 = 9$ $9 - 7 = 2$ $9 - 2 = 7$ $9 - 6 = 3$ $10 - 5 = 5$ $9 - 3 = 6$ $10 - 9 = 1$
 6 or 7 correct, go to page 36 D; 5 or less, go to B

B $10 - 5 = 5$ $9 - 2 = 7$ $9 - 7 = 2$ $9 - 2 = 7$ $9 - 7 = 2$ $9 - 7 = 2$ $10 - 1 = 9$
 $9 - 2 = 7$ $10 - 1 = 9$ $9 - 3 = 6$ $9 - 6 = 3$ $9 - 6 = 3$ $9 - 3 = 6$ $10 - 9 = 1$
 $9 - 3 = 6$ $9 - 3 = 6$ $9 - 6 = 3$ $9 - 7 = 2$ $10 - 9 = 1$ $9 - 7 = 2$ $9 - 2 = 7$
 $9 - 2 = 7$ $9 - 7 = 2$ $9 - 7 = 2$ $9 - 3 = 6$ $10 - 5 = 5$ $9 - 6 = 3$ $9 - 6 = 3$
 $9 - 7 = 2$ $10 - 1 = 9$ $9 - 7 = 2$ $9 - 2 = 7$ $9 - 2 = 7$ $9 - 3 = 6$ $10 - 9 = 1$
 $9 - 3 = 6$ $9 - 6 = 3$ $9 - 6 = 3$ $9 - 7 = 2$ $9 - 7 = 2$ $9 - 6 = 3$ $9 - 2 = 7$
 go to page 36, D

C $11 - 9 = 2$ $11 - 2 = 9$ $10 - 7 = 3$ $9 - 5 = 4$ $9 - 3 = 6$ $10 - 3 = 7$ $9 - 4 = 5$
 6 or 7 correct, go to page 37, A; 5 or less, go to D

D $11 - 2 = 9$ $11 - 2 = 9$ $11 - 9 = 2$ $11 - 9 = 2$ $11 - 2 = 9$ $10 - 7 = 3$ $10 - 7 = 3$
 $10 - 3 = 7$ $10 - 7 = 3$ $10 - 3 = 7$ $10 - 3 = 7$ $9 - 4 = 5$ $9 - 4 = 5$ $11 - 9 = 2$
 $9 - 4 = 5$ $9 - 5 = 4$ $9 - 5 = 4$ $9 - 4 = 5$ $9 - 5 = 4$ $11 - 2 = 9$ $11 - 2 = 9$
 $11 - 9 = 2$ $11 - 9 = 2$ $11 - 9 = 2$ $10 - 7 = 3$ $10 - 3 = 7$ $10 - 3 = 7$ $10 - 7 = 3$
 $9 - 3 = 6$ $9 - 6 = 3$ $11 - 2 = 9$ $10 - 3 = 7$ $9 - 4 = 5$ $9 - 5 = 4$ $11 - 9 = 2$
 $11 - 9 = 2$ $10 - 3 = 7$ $9 - 5 = 4$ $11 - 2 = 9$ $11 - 9 = 2$ $10 - 7 = 3$ $9 - 4 = 5$
 go to page 37, A

E $11 - 3 = 8$ $11 - 8 = 3$ $10 - 6 = 4$ $11 - 6 = 5$ $11 - 5 = 6$ $9 - 6 = 3$ $10 - 4 = 6$
 6 or 7 correct, go to page 37, C; 5 or less, go to page 39, A

F $12 - 6 = 6$ $11 - 4 = 7$ $11 - 7 = 4$ $12 - 7 = 5$ $12 - 4 = 8$ $12 - 9 = 3$ $12 - 3 = 9$
 6 or 7 correct, go to page 39, C; 5 or less, go to page 39, B

A	$11 = 5 + 6$	$11 = 6 + 5$	$11 = 8 + 3$	$11 = 3 + 8$	$10 = 6 + 4$	$10 = 4 + 6$	$10 = 5 + 5$
	$10 - 5 = 5$	$10 - 4 = 6$	$10 - 4 = 6$	$10 - 6 = 4$	$10 - 4 = 6$	$10 - 6 = 4$	$10 - 6 = 4$
	$11 - 6 = 5$	$11 - 6 = 5$	$11 - 5 = 6$	$11 - 5 = 6$	$11 - 6 = 5$	$11 - 5 = 6$	$11 - 6 = 5$
	$11 - 8 = 3$	$11 - 8 = 3$	$11 - 8 = 3$	$11 - 3 = 8$	$11 - 3 = 8$	$11 - 8 = 3$	$11 - 3 = 8$
	$11 - 5 = 6$	$10 - 5 = 5$	$10 - 6 = 4$	$11 - 6 = 5$	$11 - 5 = 6$	$11 - 3 = 8$	$11 - 5 = 6$
	$10 - 4 = 6$	$11 - 8 = 3$	$11 - 5 = 6$	$11 - 3 = 8$	$10 - 4 = 6$	$11 - 6 = 5$	$11 - 8 = 3$
	$11 = 3 + 8$	$11 = 6 + 5$	$10 = 4 + 6$	$11 = 8 + 3$	$11 = 5 + 6$	$11 = 3 + 8$	$10 = 6 + 4$

go to page 37, C

B	$11 = 7 + 4$	$11 = 4 + 7$	$11 - 4 = 7$	$11 - 7 = 4$	$12 = 3 + 9$	$12 - 3 = 9$	$12 = 6 + 6$
	$12 - 9 = 3$	$12 - 3 = 9$	$12 - 3 = 9$	$12 - 3 = 9$	$12 - 9 = 3$	$12 - 9 = 3$	$12 - 6 = 6$
	$12 - 6 = 6$	$11 - 7 = 4$	$11 - 7 = 4$	$11 - 4 = 7$	$11 - 4 = 7$	$11 - 7 = 4$	$11 - 4 = 7$
	$12 - 6 = 6$	$12 - 8 = 4$	$12 - 8 = 4$	$12 - 4 = 8$	$12 - 8 = 4$	$12 - 4 = 8$	$12 - 4 = 8$
	$12 - 8 = 4$	$12 - 7 = 5$	$12 - 7 = 5$	$12 - 7 = 5$	$12 - 5 = 7$	$12 - 5 = 7$	$12 - 5 = 7$
	$12 - 7 = 5$	$11 - 4 = 7$	$12 - 6 = 6$	$12 - 3 = 9$	$12 - 8 = 4$	$11 - 7 = 4$	$12 - 9 = 3$
	$11 - 4 = 7$	$12 - 3 = 9$	$11 - 7 = 4$	$12 - 5 = 7$	$12 - 9 = 3$	$12 - 4 = 8$	$12 - 7 = 5$

go to C

C Speed practice: be very careful with the signs

$3 + 2 = 5$	$4 + 3 = 7$	$2 + 3 = 5$	$2 + 5 = 7$	$4 + 4 = 8$	$3 + 5 = 8$	$6 + 3 = 9$
$2 - 1 = 1$	$3 - 2 = 1$	$3 - 3 = 0$	$3 - 0 = 3$	$5 - 2 = 3$	$5 - 3 = 2$	$4 - 4 = 0$
$2 + 4 = 6$	$3 + 4 = 7$	$6 + 2 = 8$	$2 + 6 = 8$	$5 + 4 = 9$	$4 + 6 = 10$	$3 + 6 = 9$
$5 - 4 = 1$	$6 - 3 = 3$	$5 - 5 = 0$	$7 - 5 = 2$	$7 - 2 = 5$	$6 - 4 = 2$	$7 - 3 = 4$
$5 + 2 = 7$	$6 + 4 = 10$	$4 + 5 = 9$	$5 + 6 = 11$	$7 + 3 = 10$	$3 + 7 = 10$	$8 + 3 = 11$
$7 - 4 = 3$	$8 - 0 = 8$	$8 - 5 = 3$	$9 - 4 = 5$	$9 - 9 = 0$	$10 - 6 = 4$	$9 - 5 = 4$

go to page 40, A

A Speed practice:













$2 + 3 = 5$	$3 + 4 = 7$	$3 - 2 = 1$	$4 - 4 = 0$	$4 - 0 = 4$	$2 + 4 = 6$	$2 + 5 = 7$
$4 + 4 = 8$	$3 + 5 = 8$	$5 + 3 = 8$	$8 - 5 = 3$	$8 - 3 = 5$	$6 + 2 = 8$	$2 + 6 = 8$
$8 - 6 = 2$	$8 - 2 = 6$	$8 - 7 = 1$	$8 - 1 = 7$	$8 - 0 = 8$	$8 - 8 = 0$	$1 + 7 = 8$
$3 + 6 = 9$	$6 + 3 = 9$	$2 + 7 = 9$	$9 - 0 = 9$	$9 - 9 = 0$	$4 + 6 = 10$	$6 + 4 = 10$
$0 + 9 = 9$	$9 - 0 = 9$	$9 - 9 = 0$	$7 + 2 = 9$	$2 + 7 = 9$	$4 + 7 = 11$	$9 + 2 = 11$
$5 + 7 = 12$	$7 - 4 = 3$	$8 + 4 = 12$	$9 - 8 = 1$	$7 - 3 = 4$	$9 - 6 = 3$	$8 - 5 = 3$

go to B

B

How many?

Complete:

	2 boxes	1 time = 2 boxes	
	2 boxes	2 times = 4 boxes	
	2 boxes	3 times = 6 boxes	
	2 boxes	4 times = 8 boxes	
	2 boxes	5 times = 10 boxes	
	2 boxes	6 times = 12 boxes	

go to page 41, A

A Complete each column:

$2 \times 1 = 2$	$1 \times 2 = 2$	$2 \times 6 = 12$	$2 \times 1 = 2$	$3 \times 2 = 6$	$2 \times 2 = 4$
$2 \times 2 = 4$	$2 \times 2 = 4$	$2 \times 5 = 10$	$2 \times 3 = 6$	$2 \times 2 = 4$	$2 \times 1 = 2$
$2 \times 3 = 6$	$3 \times 2 = 6$	$2 \times 4 = 8$	$2 \times 5 = 10$	$1 \times 2 = 2$	$3 \times 2 = 6$
$2 \times 4 = 8$	$4 \times 2 = 8$	$2 \times 3 = 6$	$2 \times 2 = 4$	$5 \times 2 = 10$	$2 \times 5 = 10$
$2 \times 5 = 10$	$5 \times 2 = 10$	$2 \times 2 = 4$	$2 \times 4 = 8$	$4 \times 2 = 8$	$6 \times 2 = 12$
$2 \times 6 = 12$	$6 \times 2 = 12$	$2 \times 1 = 2$	$2 \times 6 = 12$	$6 \times 2 = 12$	$4 \times 2 = 8$

go to B

B Put in the missing numbers, counting in twos:

(a) 2, 4, 6, 8, 10.

(b) 2, 4, 6, 8, 10, 12.

(c) 4, 6, 8, 10, 12.

go to D

$3 \times 1 = 3$	$1 \times 3 = 3$	$3 \times 3 = 9$	$2 \times 3 = 6$	$3 \times 2 = 6$	$3 \times 3 = 9$	$3 \times 4 = 12$
$3 \times 3 = 9$	$3 \times 2 = 6$	$1 \times 3 = 3$	$3 \times 1 = 3$	$3 \times 3 = 9$	$3 \times 4 = 12$	$4 \times 3 = 12$
$3 \times 5 = 15$	$5 \times 3 = 15$	$3 \times 6 = 18$	$6 \times 3 = 18$	$4 \times 3 = 12$	$6 \times 3 = 18$	$5 \times 3 = 15$
$6 \times 3 = 18$	$3 \times 4 = 12$	$3 \times 2 = 6$	$5 \times 3 = 15$	$3 \times 5 = 15$	$4 \times 3 = 12$	$3 \times 6 = 18$
$3 \times 3 = 9$	$3 \times 5 = 15$	$3 \times 4 = 12$	$4 \times 3 = 12$	$3 \times 6 = 18$	$5 \times 3 = 15$	$3 \times 4 = 12$

go to page 45, A

$2 \times 1 = 2$	$1 \times 2 = 2$	$2 \times 2 = 4$	$2 \times 3 = 6$	$3 \times 2 = 6$	$2 \times 4 = 8$	$4 \times 2 = 8$
$4 \times 2 = 8$	$2 \times 5 = 10$	$5 \times 2 = 10$	$2 \times 6 = 12$	$6 \times 2 = 12$	$5 \times 2 = 10$	$3 \times 2 = 6$
$5 \times 2 = 10$	$3 \times 2 = 6$	$2 \times 6 = 12$	$4 \times 2 = 8$	$2 \times 3 = 6$	$2 \times 4 = 8$	$6 \times 2 = 12$
$2 \times 4 = 8$	$6 \times 2 = 12$	$4 \times 2 = 8$	$2 \times 5 = 10$	$2 \times 4 = 8$	$3 \times 2 = 6$	$2 \times 6 = 12$
$2 \times 3 = 6$	$2 \times 6 = 12$	$2 \times 2 = 4$	$2 \times 4 = 8$	$4 \times 2 = 8$	$2 \times 6 = 12$	$2 \times 5 = 10$

go to page 42, A

A $2 \times 1 = 2$ $2 \times 2 = 4$ $3 \times 2 = 6$ $2 \times 5 = 10$ $4 \times 2 = 8$ $2 \times 4 = 8$ $6 \times 2 = 12$
 6 or 7 correct, go to page 43, A; 5 or less, go to B

B Complete by writing the answers below the line:

go to C

$2 \times$	1	2	3	4	5	6
	2	4	6	8	10	12

C

$2 \times 1 = 2$	$1 \times 2 = 2$	$2 \times 2 = 4$	$2 \times 4 = 8$	$4 \times 2 = 8$	$2 \times 3 = 6$	$2 \times 6 = 12$
$2 \times 2 = 4$	$3 \times 2 = 6$	$2 \times 3 = 6$	$1 \times 2 = 2$	$2 \times 1 = 2$	$2 \times 4 = 8$	$4 \times 2 = 8$
$2 \times 6 = 12$	$6 \times 2 = 12$	$2 \times 5 = 10$	$5 \times 2 = 10$	$2 \times 3 = 6$	$2 \times 6 = 12$	$3 \times 2 = 6$
$5 \times 2 = 10$	$4 \times 2 = 8$	$2 \times 6 = 12$	$2 \times 4 = 8$	$2 \times 5 = 10$	$4 \times 2 = 8$	$5 \times 2 = 10$
$2 \times 6 = 12$	$2 \times 3 = 6$	$2 \times 4 = 8$	$2 \times 5 = 10$	$6 \times 2 = 12$	$2 \times 5 = 10$	$2 \times 6 = 12$
$2 \times 4 = 8$	$2 \times 5 = 10$	$6 \times 2 = 12$	$2 \times 3 = 6$	$4 \times 2 = 8$	$2 \times 6 = 12$	$5 \times 2 = 10$

go to page 44, A

D Complete each column:

$5 \times 1 = 5$	$1 \times 5 = 5$	$5 \times 2 = 10$	$5 \times 3 = 15$	$4 \times 5 = 20$	$5 \times 1 = 5$
$5 \times 2 = 10$	$2 \times 5 = 10$	$5 \times 3 = 15$	$5 \times 2 = 10$	$2 \times 5 = 10$	$3 \times 5 = 15$
$5 \times 3 = 15$	$3 \times 5 = 15$	$5 \times 5 = 25$	$5 \times 4 = 20$	$6 \times 5 = 30$	$5 \times 5 = 25$
$5 \times 4 = 20$	$4 \times 5 = 20$	$5 \times 1 = 5$	$5 \times 6 = 30$	$1 \times 5 = 5$	$2 \times 5 = 10$
$5 \times 5 = 25$	$5 \times 5 = 25$	$5 \times 4 = 20$	$5 \times 1 = 5$	$3 \times 5 = 15$	$5 \times 6 = 30$
$5 \times 6 = 30$	$6 \times 5 = 30$	$5 \times 6 = 30$	$5 \times 5 = 25$	$5 \times 5 = 25$	$4 \times 5 = 20$

go to E

E Put in the missing numbers, counting in fives:

(a) 5, 10, 15, 20

(b) 5, 10, 15, 20, 25.

(c) 5, 10, 15, 20, 25, 30.

go to page 45, D

A Complete:

3 girls in 1 row = 3 girls



3 girls in 3 rows = 9 girls



3 girls in 5 rows = 15 girls



3 girls in 2 rows = 6 girls



3 girls in 4 rows = 12 girls



3 girls in 6 rows = 18 girls

go to B

B Complete each column:

$3 \times 1 = 3$

$1 \times 3 = 3$

$3 \times 2 = 6$

$3 \times 2 = 6$

$3 \times 3 = 9$

$2 \times 3 = 6$

$3 \times 2 = 6$

$2 \times 3 = 6$

$3 \times 3 = 9$

$3 \times 1 = 3$

$4 \times 3 = 12$

$3 \times 1 = 3$

$3 \times 3 = 9$

$3 \times 3 = 9$

$3 \times 5 = 15$

$3 \times 3 = 9$

$5 \times 3 = 15$

$3 \times 3 = 9$

$3 \times 4 = 12$

$4 \times 3 = 12$

$3 \times 1 = 3$

$3 \times 6 = 18$

$1 \times 3 = 3$

$6 \times 3 = 18$

$3 \times 5 = 15$

$5 \times 3 = 15$

$3 \times 4 = 12$

$3 \times 4 = 12$

$6 \times 3 = 18$

$5 \times 3 = 15$

$3 \times 6 = 18$

$6 \times 3 = 18$

$3 \times 6 = 18$

$3 \times 5 = 15$

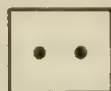
$2 \times 3 = 6$

$3 \times 4 = 12$

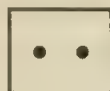
go to page 41, C

A $2 \times 1 = 2$ $2 \times 3 = 6$ $3 \times 2 = 6$ $2 \times 2 = 4$ $4 \times 2 = 8$ $5 \times 2 = 10$ $2 \times 6 = 12$
 6 or 7 correct, go to page 43, A; 5 or less, go to B

B Look carefully at these drawings, then work the sums below:



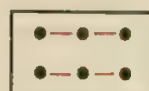
2×1



1×2



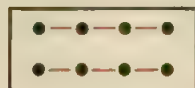
2×2



2×3



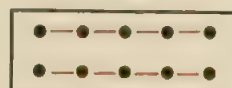
3×2



2×4



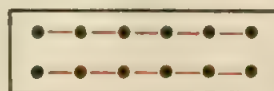
4×2



2×5



5×2



2×6



6×2

$2 \times 1 = 2$	$2 \times 3 = 6$	$2 \times 2 = 4$	$3 \times 2 = 6$	$4 \times 2 = 8$	$2 \times 4 = 8$	$5 \times 2 = 10$
$2 \times 5 = 10$	$5 \times 2 = 10$	$4 \times 2 = 8$	$2 \times 2 = 4$	$2 \times 5 = 10$	$6 \times 2 = 12$	$2 \times 6 = 12$
$2 \times 6 = 12$	$6 \times 2 = 12$	$1 \times 2 = 2$	$2 \times 6 = 12$	$2 \times 3 = 6$	$2 \times 5 = 10$	$3 \times 2 = 6$
$2 \times 3 = 6$	$2 \times 4 = 8$	$2 \times 3 = 6$	$4 \times 2 = 8$	$2 \times 5 = 10$	$2 \times 6 = 12$	$2 \times 2 = 4$
$4 \times 2 = 8$	$5 \times 2 = 10$	$2 \times 4 = 8$	$5 \times 2 = 10$	$6 \times 2 = 12$	$2 \times 4 = 8$	$2 \times 6 = 12$
$2 \times 5 = 10$	$2 \times 4 = 8$	$2 \times 6 = 12$	$2 \times 3 = 6$	$2 \times 2 = 4$	$2 \times 6 = 12$	$2 \times 5 = 10$
$2 \times 3 = 6$	$3 \times 2 = 6$	$2 \times 5 = 10$	$5 \times 2 = 10$	$2 \times 4 = 8$	$4 \times 2 = 8$	$2 \times 6 = 12$
$6 \times 2 = 12$	$2 \times 2 = 4$	$2 \times 4 = 8$	$2 \times 1 = 2$	$6 \times 2 = 12$	$3 \times 2 = 6$	$2 \times 5 = 10$

go to page 43, A

A $3 \times 1 = 3$ $3 \times 3 = 9$ $2 \times 3 = 6$ $3 \times 5 = 15$ $5 \times 3 = 15$ $4 \times 3 = 12$ $3 \times 6 = 18$
 6 or 7 correct, go to page 42, D; 5 or less, go to B

B Complete by writing the answers below the line:

go to C

$3 \times$	1	2	3	4	5	6
	3	6	9	12	15	18

C $3 \times 2 = 6$ $2 \times 3 = 6$ $3 \times 1 = 3$ $3 \times 3 = 9$ $2 \times 3 = 6$ $3 \times 2 = 6$ $3 \times 4 = 12$
 $2 \times 3 = 6$ $3 \times 4 = 12$ $3 \times 5 = 15$ $6 \times 3 = 18$ $4 \times 3 = 12$ $3 \times 2 = 6$ $3 \times 6 = 18$
 $3 \times 1 = 3$ $3 \times 2 = 6$ $3 \times 4 = 12$ $3 \times 3 = 9$ $3 \times 2 = 6$ $3 \times 6 = 18$ $4 \times 3 = 12$
 $6 \times 3 = 18$ $5 \times 3 = 15$ $2 \times 3 = 6$ $3 \times 4 = 12$ $3 \times 5 = 15$ $3 \times 3 = 9$ $5 \times 3 = 15$
 $4 \times 3 = 12$ $3 \times 6 = 18$ $3 \times 5 = 15$ $6 \times 3 = 18$ $3 \times 4 = 12$ $6 \times 3 = 18$ $3 \times 2 = 6$
 $3 \times 3 = 9$ $4 \times 3 = 12$ $3 \times 6 = 18$ $3 \times 4 = 12$ $3 \times 6 = 18$ $3 \times 5 = 15$ $6 \times 3 = 18$
 go to page 46, A

D $5 \times 1 = 5$ $5 \times 3 = 15$ $3 \times 5 = 15$ $4 \times 5 = 20$ $5 \times 2 = 10$ $6 \times 5 = 30$ $5 \times 5 = 25$
 6 or 7 correct, go to page 47, C; 5 or less, go to E

E Complete by writing the answers below the line:

go to F

$5 \times$	1	2	3	4	5	6
	5	10	15	20	25	30

F $5 \times 2 = 10$ $2 \times 5 = 10$ $5 \times 4 = 20$ $4 \times 5 = 20$ $5 \times 5 = 25$ $5 \times 6 = 30$ $6 \times 5 = 30$
 $5 \times 1 = 5$ $5 \times 3 = 15$ $5 \times 5 = 25$ $3 \times 5 = 15$ $4 \times 5 = 20$ $5 \times 4 = 20$ $2 \times 5 = 10$
 $5 \times 6 = 30$ $6 \times 5 = 30$ $5 \times 5 = 25$ $5 \times 6 = 30$ $5 \times 3 = 15$ $2 \times 5 = 10$ $3 \times 5 = 15$
 $5 \times 3 = 15$ $5 \times 5 = 25$ $5 \times 6 = 30$ $5 \times 5 = 25$ $5 \times 3 = 15$ $5 \times 6 = 30$ $5 \times 2 = 10$
 $5 \times 2 = 10$ $5 \times 6 = 30$ $4 \times 5 = 20$ $6 \times 5 = 30$ $5 \times 4 = 20$ $5 \times 5 = 25$ $5 \times 3 = 15$
 go to page 47, A

A $2 \times 3 = 6$ $3 \times 1 = 3$ $3 \times 4 = 12$ $4 \times 3 = 12$ $5 \times 3 = 15$ $3 \times 3 = 9$ $3 \times 6 = 18$
 6 or 7 correct, go to page 42, D; 5 or less, go to B

B Look carefully at these drawings, then work the sums below:



3×1



1×3



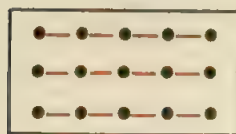
3×3



3×4



4×3



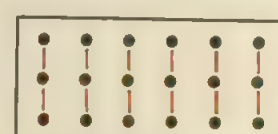
3×5



5×3



3×6



6×3

$3 \times 3 = 9$	$4 \times 3 = 12$	$3 \times 4 = 12$	$2 \times 3 = 6$	$3 \times 6 = 18$	$6 \times 3 = 18$	$5 \times 3 = 15$
$3 \times 1 = 3$	$5 \times 3 = 15$	$3 \times 3 = 9$	$1 \times 3 = 3$	$3 \times 5 = 15$	$4 \times 3 = 12$	$3 \times 3 = 9$
$3 \times 2 = 6$	$4 \times 3 = 12$	$6 \times 3 = 18$	$3 \times 4 = 12$	$3 \times 3 = 9$	$5 \times 3 = 15$	$3 \times 6 = 18$
$3 \times 1 = 3$	$1 \times 3 = 3$	$3 \times 2 = 6$	$3 \times 3 = 9$	$3 \times 4 = 12$	$4 \times 3 = 12$	$3 \times 5 = 15$
$2 \times 3 = 6$	$5 \times 3 = 15$	$3 \times 3 = 9$	$3 \times 4 = 12$	$2 \times 3 = 6$	$3 \times 5 = 15$	$3 \times 6 = 18$
$3 \times 6 = 18$	$6 \times 3 = 18$	$3 \times 5 = 15$	$5 \times 3 = 15$	$3 \times 6 = 18$	$3 \times 2 = 6$	$3 \times 3 = 9$
$3 \times 2 = 6$	$3 \times 4 = 12$	$3 \times 3 = 9$	$2 \times 3 = 6$	$3 \times 4 = 12$	$4 \times 3 = 12$	$3 \times 2 = 6$
$5 \times 3 = 15$	$2 \times 3 = 6$	$4 \times 3 = 12$	$6 \times 3 = 18$	$5 \times 3 = 15$	$3 \times 6 = 18$	$3 \times 4 = 12$
$3 \times 4 = 12$	$3 \times 6 = 18$	$3 \times 5 = 15$	$5 \times 3 = 15$	$3 \times 4 = 12$	$3 \times 5 = 15$	$6 \times 3 = 18$

go to page 42, D

A $5 \times 1 = 5$ $5 \times 3 = 15$ $3 \times 5 = 15$ $5 \times 2 = 10$ $5 \times 5 = 25$ $4 \times 5 = 20$ $5 \times 6 = 30$
 6 or 7 correct, go to C; 5 or less, go to B

B $5 \times 2 = 10$ $2 \times 5 = 10$ $5 \times 4 = 20$ $4 \times 5 = 20$ $5 \times 3 = 15$ $3 \times 5 = 15$ $5 \times 5 = 25$
 $5 \times 5 = 25$ $3 \times 5 = 15$ $5 \times 3 = 15$ $1 \times 5 = 5$ $5 \times 1 = 5$ $5 \times 4 = 20$ $4 \times 5 = 20$
 $5 \times 6 = 30$ $6 \times 5 = 30$ $5 \times 2 = 10$ $2 \times 5 = 10$ $5 \times 3 = 15$ $5 \times 6 = 30$ $3 \times 5 = 15$
 $2 \times 5 = 10$ $4 \times 5 = 20$ $5 \times 6 = 30$ $5 \times 4 = 20$ $5 \times 5 = 25$ $4 \times 5 = 20$ $2 \times 5 = 10$
 $5 \times 6 = 30$ $5 \times 5 = 25$ $5 \times 4 = 20$ $6 \times 5 = 30$ $5 \times 4 = 20$ $5 \times 3 = 15$ $5 \times 6 = 30$
 $5 \times 4 = 20$ $6 \times 5 = 30$ $5 \times 5 = 25$ $4 \times 5 = 20$ $5 \times 3 = 15$ $5 \times 6 = 30$ $5 \times 5 = 25$
 $5 \times 5 = 25$ $2 \times 5 = 10$ $5 \times 3 = 15$ $5 \times 6 = 30$ $5 \times 5 = 25$ $5 \times 4 = 20$ $6 \times 5 = 30$
 $5 \times 1 = 5$ $3 \times 5 = 15$ $5 \times 2 = 10$ $5 \times 3 = 15$ $4 \times 5 = 20$ $6 \times 5 = 30$ $3 \times 5 = 15$
 go to C

C Complete by writing the answers below the line:

$$4 \times \begin{array}{|c|c|c|c|c|c|} \hline 1 & 2 & 3 & 4 & 5 & 6 \\ \hline 4 & 8 & 12 & 16 & 20 & 24 \\ \hline \end{array}$$

go to D

D $4 \times 2 = 8$ $4 \times 3 = 12$ $4 \times 1 = 4$ $4 \times 6 = 24$ $4 \times 4 = 16$ $4 \times 6 = 24$ $4 \times 5 = 20$
 $4 \times 1 = 4$ $4 \times 2 = 8$ $2 \times 4 = 8$ $4 \times 4 = 16$ $4 \times 3 = 12$ $3 \times 4 = 12$ $4 \times 6 = 24$
 $4 \times 5 = 20$ $5 \times 4 = 20$ $4 \times 6 = 24$ $6 \times 4 = 24$ $4 \times 2 = 8$ $2 \times 4 = 8$ $4 \times 5 = 20$
 $4 \times 6 = 24$ $4 \times 3 = 12$ $3 \times 4 = 12$ $4 \times 5 = 20$ $4 \times 4 = 16$ $5 \times 4 = 20$ $4 \times 4 = 16$
 $4 \times 5 = 20$ $4 \times 4 = 16$ $4 \times 2 = 8$ $6 \times 4 = 24$ $4 \times 6 = 24$ $6 \times 4 = 24$ $4 \times 4 = 16$
 $4 \times 4 = 16$ $4 \times 2 = 8$ $6 \times 4 = 24$ $4 \times 4 = 16$ $4 \times 3 = 12$ $4 \times 5 = 20$ $4 \times 6 = 24$
 $4 \times 2 = 8$ $4 \times 4 = 16$ $4 \times 3 = 12$ $4 \times 6 = 24$ $4 \times 5 = 20$ $4 \times 4 = 16$ $5 \times 4 = 20$
 $4 \times 6 = 24$ $4 \times 5 = 20$ $4 \times 6 = 24$ $4 \times 3 = 12$ $4 \times 4 = 16$ $4 \times 3 = 12$ $6 \times 4 = 24$

go to page 48, A

A $4 \times 1 = 4$ $2 \times 4 = 8$ $4 \times 3 = 12$ $3 \times 4 = 12$ $5 \times 4 = 20$ $4 \times 4 = 16$ $4 \times 6 = 24$
 6 or 7 correct, go to C; 5 or less, go to B

B

$4 \times 1 = 4$	$3 \times 4 = 12$	$4 \times 3 = 12$	$4 \times 6 = 24$	$6 \times 4 = 24$	$5 \times 4 = 20$	$4 \times 5 = 20$
$4 \times 2 = 8$	$4 \times 5 = 20$	$5 \times 4 = 20$	$4 \times 3 = 12$	$3 \times 4 = 12$	$4 \times 4 = 16$	$4 \times 6 = 24$
$6 \times 4 = 24$	$4 \times 6 = 24$	$4 \times 4 = 16$	$2 \times 4 = 8$	$4 \times 4 = 16$	$4 \times 6 = 24$	$4 \times 3 = 12$
$4 \times 4 = 16$	$3 \times 4 = 12$	$4 \times 4 = 16$	$6 \times 4 = 24$	$4 \times 4 = 16$	$4 \times 5 = 20$	$4 \times 2 = 8$
$4 \times 6 = 24$	$4 \times 4 = 16$	$4 \times 5 = 20$	$4 \times 3 = 12$	$4 \times 5 = 20$	$6 \times 4 = 24$	$4 \times 4 = 16$
$4 \times 2 = 8$	$4 \times 3 = 12$	$5 \times 4 = 20$	$4 \times 4 = 16$	$6 \times 4 = 24$	$4 \times 3 = 12$	$4 \times 6 = 24$
$4 \times 3 = 12$	$4 \times 6 = 24$	$6 \times 4 = 24$	$2 \times 4 = 8$	$4 \times 5 = 20$	$5 \times 4 = 20$	$4 \times 4 = 16$
$4 \times 2 = 8$	$4 \times 1 = 4$	$4 \times 5 = 20$	$4 \times 6 = 24$	$4 \times 3 = 12$	$4 \times 4 = 16$	$4 \times 6 = 24$

go to C

C Complete by writing the answers below the line:

$$6 \times \begin{array}{|c|c|c|c|c|c|} \hline 1 & 2 & 3 & 4 & 5 & 6 \\ \hline 6 & 12 & 18 & 24 & 30 & 36 \\ \hline \end{array}$$

go to D

D

$6 \times 2 = 12$	$2 \times 6 = 12$	$6 \times 1 = 6$	$3 \times 6 = 18$	$6 \times 3 = 18$	$5 \times 6 = 30$	$6 \times 5 = 30$
$6 \times 4 = 24$	$4 \times 6 = 24$	$6 \times 5 = 30$	$6 \times 6 = 36$	$5 \times 6 = 30$	$4 \times 6 = 24$	$6 \times 4 = 24$
$6 \times 6 = 36$	$6 \times 5 = 30$	$6 \times 3 = 18$	$4 \times 6 = 24$	$3 \times 6 = 18$	$6 \times 5 = 30$	$6 \times 6 = 36$
$5 \times 6 = 30$	$4 \times 6 = 24$	$6 \times 6 = 36$	$6 \times 3 = 18$	$6 \times 6 = 36$	$6 \times 4 = 24$	$6 \times 2 = 12$
$6 \times 3 = 18$	$6 \times 5 = 30$	$6 \times 2 = 12$	$6 \times 4 = 24$	$6 \times 1 = 6$	$6 \times 3 = 18$	$6 \times 6 = 36$
$6 \times 4 = 24$	$6 \times 6 = 36$	$6 \times 5 = 30$	$6 \times 3 = 18$	$4 \times 6 = 24$	$6 \times 6 = 36$	$5 \times 6 = 30$
$6 \times 5 = 30$	$6 \times 3 = 18$	$3 \times 6 = 18$	$6 \times 6 = 36$	$6 \times 5 = 30$	$5 \times 6 = 30$	$6 \times 4 = 24$
$6 \times 2 = 12$	$6 \times 5 = 30$	$6 \times 6 = 36$	$6 \times 4 = 24$	$6 \times 1 = 6$	$6 \times 3 = 18$	$6 \times 6 = 36$

go to page 50, A

A Look carefully at these drawings, then work the sums below:



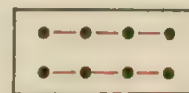
1×1



3×1

3×0

5×0



2×4

2×0

$2 \times 1 = 2$	$2 \times 0 = 0$	$3 \times 1 = 3$	$3 \times 0 = 0$	$4 \times 2 = 8$	$4 \times 0 = 0$	$5 \times 3 = 15$
$3 \times 3 = 9$	$3 \times 0 = 0$	$4 \times 4 = 16$	$4 \times 1 = 4$	$4 \times 0 = 0$	$6 \times 2 = 12$	$2 \times 6 = 12$
$4 \times 0 = 0$	$5 \times 5 = 25$	$5 \times 0 = 0$	$2 \times 1 = 2$	$1 \times 2 = 2$	$4 \times 5 = 20$	$4 \times 0 = 0$
$2 \times 6 = 12$	$2 \times 5 = 10$	$4 \times 4 = 16$	$2 \times 3 = 6$	$6 \times 0 = 0$	$2 \times 4 = 8$	$1 \times 3 = 3$
$1 \times 0 = 0$	$2 \times 4 = 8$	$3 \times 2 = 6$	$4 \times 0 = 0$	$2 \times 2 = 4$	$3 \times 3 = 9$	$5 \times 0 = 0$
$2 \times 6 = 12$	$3 \times 3 = 9$	$3 \times 5 = 15$	$3 \times 4 = 12$	$4 \times 2 = 8$	$3 \times 6 = 18$	$6 \times 2 = 12$
$4 \times 4 = 16$	$6 \times 5 = 30$	$4 \times 6 = 24$	$5 \times 6 = 30$	$6 \times 0 = 0$	$6 \times 6 = 36$	$6 \times 5 = 30$

go to page 50, C

B Speed practice:

$9 + 3 = 12$	$3 + 9 = 12$	$12 - 9 = 3$	$12 - 3 = 9$	$9 + 2 = 11$	$2 + 9 = 11$	$11 - 9 = 2$
$11 - 2 = 9$	$7 - 7 = 0$	$7 - 0 = 7$	$8 + 4 = 12$	$4 + 8 = 12$	$12 - 4 = 8$	$12 - 8 = 4$
$7 + 5 = 12$	$5 + 7 = 12$	$12 - 7 = 5$	$12 - 5 = 7$	$6 + 4 = 10$	$10 - 6 = 4$	$10 - 4 = 6$
$6 + 6 = 12$	$12 - 6 = 6$	$5 + 5 = 10$	$10 - 5 = 5$	$6 + 5 = 11$	$5 + 6 = 11$	$11 - 5 = 6$
$11 - 6 = 5$	$11 - 5 = 6$	$7 + 4 = 11$	$4 + 7 = 11$	$11 - 4 = 7$	$11 - 7 = 4$	$0 + 0 = 0$
$8 + 3 = 11$	$3 + 8 = 11$	$11 - 8 = 3$	$11 - 3 = 8$	$12 - 7 = 5$	$9 - 6 = 3$	$6 + 7 = 13$
$12 - 3 = 9$	$11 - 7 = 4$	$6 + 7 = 13$	$5 + 6 = 11$	$9 - 7 = 2$	$6 + 7 = 13$	$8 - 5 = 3$
$7 - 7 = 0$	$8 + 5 = 13$	$4 + 8 = 12$	$9 - 6 = 3$	$10 - 7 = 3$	$4 + 7 = 11$	$11 - 4 = 7$
$4 + 9 = 13$	$9 - 5 = 4$	$9 + 6 = 15$	$12 - 7 = 5$	$5 + 8 = 13$	$10 - 5 = 5$	$12 - 9 = 3$

go to page 51, A

A $2 \times 6 = 12$ $6 \times 1 = 6$ $6 \times 3 = 18$ $6 \times 4 = 24$ $4 \times 6 = 24$ $6 \times 6 = 36$ $5 \times 6 = 30$
 6 or 7 correct, go to page 49, A; 5 or less, go to B

B

$6 \times 1 = 6$	$1 \times 6 = 6$	$6 \times 3 = 18$	$3 \times 6 = 18$	$4 \times 6 = 24$	$6 \times 4 = 24$	$2 \times 6 = 12$
$5 \times 6 = 30$	$6 \times 5 = 30$	$6 \times 4 = 24$	$6 \times 6 = 36$	$6 \times 2 = 12$	$5 \times 6 = 30$	$6 \times 6 = 36$
$6 \times 6 = 36$	$6 \times 3 = 18$	$6 \times 5 = 30$	$6 \times 4 = 24$	$6 \times 3 = 18$	$6 \times 6 = 36$	$6 \times 5 = 30$
$2 \times 6 = 12$	$6 \times 4 = 24$	$6 \times 6 = 36$	$5 \times 6 = 30$	$6 \times 5 = 30$	$6 \times 3 = 18$	$4 \times 6 = 24$
$4 \times 6 = 24$	$5 \times 6 = 30$	$6 \times 5 = 30$	$6 \times 6 = 36$	$6 \times 4 = 24$	$5 \times 6 = 30$	$6 \times 3 = 18$
$6 \times 6 = 36$	$6 \times 2 = 12$	$6 \times 4 = 24$	$6 \times 5 = 30$	$3 \times 6 = 18$	$6 \times 6 = 36$	$4 \times 6 = 24$
$6 \times 3 = 18$	$1 \times 6 = 6$	$6 \times 6 = 36$	$4 \times 6 = 24$	$6 \times 6 = 36$	$6 \times 4 = 24$	$6 \times 5 = 30$

go to page 49,

C $3 \times 1 = 3$ $3 \times 0 = 0$ $2 \times 2 = 4$ $2 \times 0 = 0$ $6 \times 3 = 18$ $6 \times 0 = 0$ $1 \times 0 = 0$
 6 or 7 correct, go to page 49, B; 5 or less, go to D

D

$1 \times 1 = 1$	$1 \times 0 = 0$	$2 \times 1 = 2$	$2 \times 0 = 0$	$6 \times 1 = 6$	$6 \times 0 = 0$	$4 \times 1 = 4$
$4 \times 0 = 0$	$3 \times 0 = 0$	$4 \times 3 = 12$	$5 \times 0 = 0$	$4 \times 5 = 20$	$5 \times 3 = 15$	$4 \times 6 = 24$
$6 \times 2 = 12$	$4 \times 0 = 0$	$5 \times 5 = 25$	$5 \times 4 = 20$	$6 \times 3 = 18$	$4 \times 0 = 0$	$6 \times 4 = 24$
$5 \times 0 = 0$	$6 \times 4 = 24$	$6 \times 6 = 36$	$6 \times 5 = 30$	$3 \times 5 = 15$	$4 \times 4 = 16$	$6 \times 6 = 36$
$3 \times 6 = 18$	$4 \times 5 = 20$	$5 \times 4 = 20$	$6 \times 2 = 12$	$6 \times 5 = 30$	$5 \times 3 = 15$	$4 \times 5 = 20$
$3 \times 0 = 0$	$4 \times 4 = 16$	$6 \times 6 = 36$	$5 \times 3 = 15$	$5 \times 0 = 0$	$3 \times 3 = 9$	$3 \times 0 = 0$
$6 \times 4 = 24$	$6 \times 0 = 0$	$5 \times 0 = 0$	$5 \times 5 = 25$	$6 \times 5 = 30$	$2 \times 0 = 0$	$6 \times 6 = 36$
$5 \times 0 = 0$	$5 \times 4 = 20$	$1 \times 0 = 0$	$4 \times 0 = 0$	$3 \times 4 = 12$	$4 \times 6 = 24$	$2 \times 0 = 0$
$4 \times 6 = 24$	$3 \times 5 = 15$	$4 \times 5 = 20$	$6 \times 4 = 24$	$6 \times 0 = 0$	$6 \times 6 = 36$	$5 \times 6 = 30$
$3 \times 0 = 0$	$2 \times 0 = 0$	$2 \times 1 = 2$	$5 \times 0 = 0$	$5 \times 5 = 25$	$6 \times 1 = 6$	$6 \times 0 = 0$

go to page 49, B

A Work across the page: Add + Plus + Total

Add 5 and 2 7 add 6 and 1 7 add 6 and 0 6 add 7 and 0 7 add 0 and 5 5

Add 0 to 3 3 add 0 to 6 6 add 7 and 1 8 add 6 and 4 10 add 3 and 6 9

8 plus 1 = 9 9 plus 1 = 10 8 plus 0 = 8 9 plus 0 = 9 5 plus 3 = 8 4 plus 4 = 8

6 plus 5 = 11 9 plus 2 = 11 7 plus 3 = 10 8 plus 4 = 12 6 plus 3 = 9 7 plus 4 = 11

If the total of 4 and 2 is 6, what is the total of 2 and 4? 6

If the total of 0 and 3 is 3, what is the total of 3 and 0? 3

Total of 5 and 6 = 11 total of 7 and 0 = 7 total of 9 and 3 = 12 total of 10 and 4 = 14

Total of 10 and 3 = 13 total of 9 and 4 = 13 total of 8 and 6 = 14 total of 6 and 7 = 13

go to B

B Minus — Subtract

From 10 take 8 2 from 8 take 6 2 take 10 from 12 2 take 9 from 11 2 from 9 take 3 6

Take 7 from 9 2 from 12 take 3 9 from 11 take 8 3 take 6 from 9 3 take 7 from 10 3

2 from 4 = 2 4 from 11 = 7 0 from 6 = 6 5 from 8 = 3 3 from 8 = 5

3 from 7 = 4 4 from 8 = 4 7 from 10 = 3 3 from 10 = 7 4 from 9 = 5

9 minus 8 = 1 11 minus 3 = 8 8 minus 8 = 0 9 minus 0 = 9 12 minus 5 = 7

12 minus 4 = 8 10 minus 3 = 7 12 minus 8 = 4 11 minus 6 = 5 12 minus 9 = 3

Subtract 7 from 11 4 subtract 5 from 8 3 subtract 7 from 10 3 subtract 5 from 9 4

Subtract 5 from 10 5 subtract 6 from 9 3 subtract 6 from 11 5 subtract 7 from 12 5

From 9 subtract 7 2 from 12 subtract 6 6 from 7 subtract 3 4 from 11 subtract 8 3

From 11 subtract 4 7 from 10 subtract 8 2 from 9 subtract 4 5 from 12 subtract 5 7

go to page 52, A

52 How many? ÷

A Complete:



How many rows of shoes? 2

How many shoes in each row? 3

How many shoes altogether? 6

How many pairs of shoes? 3

Are there more rows of 3 than there are shoes altogether? No

Are there more pairs of shoes than there are shoes altogether? No

Are there more shoes than there are pairs of shoes? Yes

Are there more shoes than there are rows of 3 shoes? Yes

$$6 = 3 \times 2$$

$$6 \div 3 = 2$$

$$6 = 2 \times 3$$

$$6 \div 2 = 3$$

$$6 \div 3 = 2$$

$$6 \div 2 = 3$$



How many chocolates? 20

How many boys can have 4 each? 5

How many girls can have 5 each? 4

$$4 \times 5 = 20$$

$$5 \times 4 = 20$$

$$4 \times 5 = 20$$

$$5 \times 4 = 20$$

$$20 = 4 \times 5$$

$$20 \div 4 = 5$$

$$20 = 5 \times 4$$

$$20 \div 5 = 4$$

go to B

B

$$6 \div 3 = 2$$

$$6 \div 2 = 3$$

$$20 \div 5 = 4$$

$$20 \div 4 = 5$$

$$6 \div 3 = 2$$

$$6 \div 6 = 1$$

$$6 \div 2 = 3$$

$$20 \div 4 = 5$$

$$20 \div 5 = 4$$

$$6 \div 2 = 3$$

$$6 \div 3 = 2$$

$$20 \div 5 = 4$$

$$20 \div 4 = 5$$

$$6 \div 6 = 1$$

go to page 53, A

- A** You have practised tables to 6×6 . Copy the tables square below and complete it by multiplying each number in the top row by each figure in the left column, placing your answer in the square beneath the first number and in line with the figure by which you are multiplying.

In your square you will find that four of the answers are the number 12, coming from 2×6 , 6×2 , 3×4 , 4×3 .

This tells us that

$$12 \div 2 = 6 \text{ and } 12 \div 6 = 2, 12 \div 3 = 4 \text{ and } 12 \div 4 = 3$$

In the same way you can find all the pairs of numbers which can be multiplied together to make each of the numbers in the square.

	1	2	3	4	5	6
1	1	2	3	4	5	6
2	2	4	6	8	10	12
3	3	6	9	12	15	18
4	4	8	12	16	20	24
5	5	10	15	20	25	30
6	6	12	18	24	30	36

Use the square to complete the answers in B

B Practice:

$2 \times 2 = 4$	$4 \div 2 = 2$	$2 \times 1 = 2$	$2 \div 2 = 1$	$3 \times 1 = 3$	$3 \div 3 = 1$	$4 \div 4 = 1$
$2 \times 3 = 6$	$6 \div 2 = 3$	$6 \div 3 = 2$	$3 \times 3 = 9$	$9 \div 3 = 3$	$4 \times 2 = 8$	$8 \div 4 = 2$
$8 \div 2 = 4$	$5 \times 2 = 10$	$10 \div 5 = 2$	$10 \div 2 = 5$	$2 \times 6 = 12$	$12 \div 2 = 6$	$12 \div 6 = 2$
$5 \times 3 = 15$	$15 \div 5 = 3$	$3 \times 5 = 15$	$15 \div 3 = 5$	$3 \times 4 = 12$	$4 \times 3 = 12$	$12 \div 4 = 3$
$12 \div 3 = 4$	$4 \times 4 = 16$	$16 \div 4 = 4$	$5 \times 4 = 20$	$20 \div 5 = 4$	$4 \times 5 = 20$	$20 \div 4 = 5$
$8 \div 2 = 4$	$8 \div 4 = 2$	$9 \div 3 = 3$	$10 \div 2 = 5$	$10 \div 5 = 2$	$6 \div 3 = 2$	$6 \div 2 = 3$
$4 \div 4 = 1$	$5 \div 5 = 1$	$12 \div 2 = 6$	$12 \div 6 = 2$	$6 \div 6 = 1$	$12 \div 4 = 3$	$12 \div 3 = 4$
$16 \div 4 = 4$	$15 \div 5 = 3$	$15 \div 3 = 5$	$20 \div 4 = 5$	$20 \div 5 = 4$	$9 \div 3 = 3$	$16 \div 4 = 4$
$5 \times 5 = 25$	$25 \div 5 = 5$	$3 \times 6 = 18$	$18 \div 3 = 6$	$6 \times 3 = 18$	$18 \div 6 = 3$	$25 \div 5 = 5$
$18 \div 6 = 3$	$6 \times 4 = 24$	$24 \div 6 = 4$	$4 \times 6 = 24$	$24 \div 4 = 6$	$6 \times 6 = 36$	$36 \div 6 = 6$
$36 \div 6 = 6$	$18 \div 3 = 6$	$6 \times 5 = 30$	$30 \div 6 = 5$	$5 \times 6 = 30$	$30 \div 5 = 6$	$24 \div 6 = 4$

go to page 54, A

A $2 \div 2 = 1$ $3 \div 3 = 1$ $4 \div 2 = 2$ $6 \div 2 = 3$ $6 \div 3 = 2$ $8 \div 2 = 4$ $8 \div 4 = 2$
 6 or 7 correct, go to C; 5 or less, go to B

B $2 \times 1 = 2$ $2 = 1 \times 2$ $2 \times 1 = 2$ $1 \times 2 = 2$ $2 \div 2 = 1$ $3 = 3 \times 1$ $3 \div 3 = 1$
 $2 \times 2 = 4$ $4 = 2 \times 2$ $4 \div 2 = 2$ $3 \times 2 = 6$ $2 \times 3 = 6$ $6 = 2 \times 3$ $6 \div 2 = 3$
 $6 = 3 \times 2$ $6 \div 3 = 2$ $2 \div 2 = 1$ $3 \div 3 = 1$ $6 \div 2 = 3$ $6 \div 3 = 2$ $4 \div 2 = 2$
 $2 \times 4 = 8$ $8 = 2 \times 4$ $8 \div 2 = 4$ $4 \times 2 = 8$ $8 = 4 \times 2$ $8 \div 4 = 2$ $8 \div 2 = 4$
 $8 \div 2 = 4$ $8 \div 4 = 2$ $6 \div 3 = 2$ $4 \div 2 = 2$ $3 \div 3 = 1$ $6 \div 2 = 3$ $8 \div 4 = 2$
 go to page 56, A

C $9 \div 3 = 3$ $10 \div 2 = 5$ $10 \div 5 = 2$ $5 \div 5 = 1$ $12 \div 3 = 4$ $12 \div 4 = 3$ $16 \div 4 = 4$
 6 or 7 correct, go to E; 5 or less, go to D

D $2 \times 5 = 10$ $10 = 2 \times 5$ $10 \div 2 = 5$ $5 \times 2 = 10$ $10 = 5 \times 2$ $10 \div 5 = 2$ $10 \div 2 = 5$
 $3 \times 3 = 9$ $9 = 3 \times 3$ $9 \div 3 = 3$ $4 \times 4 = 16$ $16 = 4 \times 4$ $16 \div 4 = 4$ $9 \div 3 = 3$
 $10 \div 5 = 2$ $10 \div 2 = 5$ $3 \times 4 = 12$ $12 = 3 \times 4$ $12 \div 3 = 4$ $12 = 4 \times 3$ $12 \div 4 = 3$
 $12 \div 3 = 4$ $12 \div 4 = 3$ $16 \div 4 = 4$ $9 \div 3 = 3$ $10 \div 5 = 2$ $9 \div 3 = 3$ $10 \div 2 = 5$
 go to page 56, C

E $12 \div 2 = 6$ $12 \div 6 = 2$ $15 \div 3 = 5$ $18 \div 3 = 6$ $18 \div 6 = 3$ $15 \div 5 = 3$ $25 \div 5 = 5$
 6 or 7 correct, go to 55, A; 5 or less, go to F

F $3 \times 5 = 15$ $3 \times 5 = 15$ $15 = 3 \times 5$ $15 \div 3 = 5$ $15 \div 5 = 3$ $12 = 2 \times 6$ $12 \div 2 = 6$
 $2 \times 6 = 12$ $12 \div 2 = 6$ $6 \times 2 = 12$ $6 \times 2 = 12$ $12 \div 6 = 2$ $15 = 5 \times 3$ $15 \div 5 = 3$
 $5 \times 5 = 25$ $25 = 5 \times 5$ $25 \div 5 = 5$ $3 \times 6 = 18$ $3 \times 6 = 18$ $6 \times 3 = 18$ $18 \div 6 = 3$
 $18 \div 3 = 6$ $12 \div 6 = 2$ $15 \div 3 = 5$ $18 \div 6 = 3$ $25 \div 5 = 5$ $15 \div 5 = 3$ $25 \div 5 = 5$
 go to page 56, E

A $20 \div 4 = 5$ $24 \div 6 = 4$ $24 \div 4 = 6$ $36 \div 6 = 6$ $20 \div 5 = 4$ $30 \div 5 = 6$ $30 \div 6 = 5$
 6 or 7 correct, go to C; 5 or less, go to B

B $4 \times 6 = 24$ $6 \times 4 = 24$ $4 \times 6 = 24$ $24 \div 6 = 4$ $24 \div 4 = 6$ $24 \div 6 = 4$ $24 \div 4 = 6$
 $5 \times 4 = 20$ $20 \div 5 = 4$ $4 \times 5 = 20$ $20 \div 4 = 5$ $20 \div 5 = 4$ $20 \div 4 = 5$ $20 \div 5 = 4$
 $6 \times 6 = 36$ $6 \times 6 = 36$ $36 \div 6 = 6$ $6 \times 5 = 30$ $5 \times 6 = 30$ $30 \div 6 = 5$ $36 \div 6 = 6$
 $30 \div 5 = 6$ $24 \div 4 = 6$ $20 \div 5 = 4$ $36 \div 6 = 6$ $24 \div 6 = 4$ $20 \div 4 = 5$ $30 \div 6 = 5$
 $36 \div 6 = 6$ $30 \div 6 = 5$ $24 \div 6 = 4$ $24 \div 4 = 6$ $20 \div 5 = 4$ $36 \div 6 = 6$ $30 \div 5 = 6$
 go to page 57, B

C Practice:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$11 + 2 = 13$	$12 + 2 = 14$	$11 + 0 = 11$	$12 + 0 = 12$	$13 + 2 = 15$	$9 + 0 = 9$	$11 + 2 = 13$													
$11 + 4 = 15$	$13 + 2 = 15$	$12 + 3 = 15$	$9 + 5 = 14$	$11 + 4 = 15$	$12 + 2 = 14$	$13 + 3 = 16$	$11 + 3 = 14$	$12 + 0 = 12$											
$12 + 3 = 15$	$9 + 5 = 14$	$11 + 4 = 15$	$12 + 2 = 14$	$13 + 3 = 16$	$11 + 3 = 14$	$12 + 0 = 12$													
$8 + 6 = 14$	$11 + 3 = 14$	$13 + 2 = 15$	$11 + 5 = 16$	$12 + 4 = 16$	$9 + 5 = 14$	$13 + 3 = 16$													
$13 + 0 = 13$	$13 + 3 = 16$	$8 + 6 = 14$	$12 + 5 = 17$	$14 + 2 = 16$	$11 + 5 = 16$	$12 + 4 = 16$													
$11 + 5 = 16$	$14 + 2 = 16$	$12 + 4 = 16$	$14 + 3 = 17$	$9 + 6 = 15$	$12 + 5 = 17$	$14 + 2 = 16$													
$14 + 3 = 17$	$12 + 5 = 17$	$9 + 6 = 15$	$11 + 6 = 17$	$14 + 3 = 17$	$11 + 7 = 18$	$11 + 6 = 17$													
$9 + 6 = 15$	$11 + 7 = 18$	$8 + 7 = 15$	$10 + 7 = 17$	$13 + 4 = 17$	$8 + 7 = 15$	$12 + 6 = 18$	$14 + 4 = 18$	$13 + 5 = 18$											
$11 + 6 = 17$	$10 + 7 = 17$	$13 + 4 = 17$	$11 + 7 = 18$	$12 + 6 = 18$	$14 + 4 = 18$	$13 + 5 = 18$													
$12 + 6 = 18$	$8 + 7 = 15$	$15 + 2 = 17$	$14 + 4 = 18$	$10 + 7 = 17$	$13 + 4 = 17$	$11 + 7 = 18$													
$14 + 4 = 18$	$13 + 6 = 19$	$14 + 5 = 19$	$12 + 6 = 18$	$13 + 5 = 18$	$15 + 2 = 17$	$13 + 6 = 19$													
$15 + 3 = 18$	$13 + 5 = 18$	$9 + 7 = 16$	$15 + 3 = 18$	$14 + 5 = 19$	$15 + 4 = 19$	$14 + 6 = 20$													
$13 + 6 = 19$	$9 + 7 = 16$	$7 + 9 = 16$	$15 + 4 = 19$	$14 + 6 = 20$	$7 + 8 = 15$	$15 + 3 = 18$													

go to page 57, D

A $4 \div 2 = 2$ $3 \div 3 = 1$ $6 \div 3 = 2$ $2 \div 2 = 1$ $6 \div 2 = 3$ $8 \div 4 = 2$ $8 \div 2 = 4$
 6 or 7 correct, go to page 54, C; 5 or less, go to B

B $2 \times 1 = 2$ $2 \times 1 = 2$ $2 = 2 \times 1$ $2 = 1 \times 2$ $2 \div 2 = 1$ $3 \times 1 = 3$ $3 \div 3 = 1$
 $4 \times 1 = 4$ $4 \div 4 = 1$ $2 \times 2 = 4$ $4 = 2 \times 2$ $4 = 2 \times 2$ $4 \div 2 = 2$ $2 \div 2 = 1$
 $6 = 2 \times 3$ $6 \div 2 = 3$ $6 = 3 \times 2$ $6 \div 3 = 2$ $2 \times 4 = 8$ $8 = 2 \times 4$ $8 \div 2 = 4$
 $4 \times 2 = 8$ $8 = 4 \times 2$ $8 \div 4 = 2$ $8 \div 2 = 4$ $4 \div 2 = 2$ $4 \div 4 = 1$ $8 \div 4 = 2$
 $6 \div 3 = 2$ $6 \div 2 = 3$ $3 \div 3 = 1$ $8 \div 4 = 2$ $8 \div 4 = 2$ $6 \div 3 = 2$ $8 \div 2 = 4$
 $4 \div 2 = 2$ $8 \div 4 = 2$ $8 \div 2 = 4$ $6 \div 3 = 2$ $3 \div 3 = 1$ $8 \div 4 = 2$ $6 \div 2 = 3$
 go to page 54, C

C $10 \div 2 = 5$ $10 \div 5 = 2$ $9 \div 3 = 3$ $5 \div 5 = 1$ $12 \div 4 = 3$ $16 \div 4 = 4$ $12 \div 3 = 4$
 6 or 7 correct, go to page 54, E; 5 or less, go to D

D $3 \times 3 = 9$ $9 = 3 \times 3$ $9 \div 3 = 3$ $3 \times 3 = 9$ $9 \div 3 = 3$ $10 = 2 \times 5$ $10 \div 2 = 5$
 $2 \times 5 = 10$ $10 \div 2 = 5$ $5 \times 2 = 10$ $10 = 5 \times 2$ $5 \times 2 = 10$ $10 \div 5 = 2$ $5 \div 5 = 1$
 $12 = 3 \times 4$ $3 \times 4 = 12$ $3 \times 4 = 12$ $12 \div 3 = 4$ $4 \times 3 = 12$ $12 = 4 \times 3$ $12 \div 4 = 3$
 $4 \times 4 = 16$ $4 \times 3 = 12$ $3 \times 3 = 9$ $2 \times 5 = 10$ $3 \times 4 = 12$ $5 \times 1 = 5$ $10 \div 2 = 5$
 $4 \times 4 = 16$ $4 \times 4 = 16$ $16 = 4 \times 4$ $16 \div 4 = 4$ $10 \div 2 = 5$ $9 \div 3 = 3$ $12 \div 3 = 4$
 $16 \div 4 = 4$ $9 \div 3 = 3$ $12 \div 3 = 4$ $10 \div 2 = 5$ $12 \div 4 = 3$ $10 \div 5 = 2$ $16 \div 4 = 4$
 $12 \div 3 = 4$ $10 \div 5 = 2$ $16 \div 4 = 4$ $9 \div 3 = 3$ $16 \div 4 = 4$ $10 \div 2 = 5$ $12 \div 4 = 3$
 $16 \div 4 = 4$ $12 \div 4 = 3$ $9 \div 3 = 3$ $10 \div 2 = 5$ $9 \div 3 = 3$ $12 \div 3 = 4$ $16 \div 4 = 4$
 $10 \div 5 = 2$ $16 \div 4 = 4$ $12 \div 4 = 3$ $5 \div 5 = 1$ $12 \div 4 = 3$ $16 \div 2 = 8$ $8 \div 2 = 4$
 go to page 54, E

E $12 \div 6 = 2$ $15 \div 5 = 3$ $25 \div 5 = 5$ $15 \div 3 = 5$ $12 \div 2 = 6$ $18 \div 6 = 3$ $18 \div 3 = 6$
 6 or 7 correct, go to page 55, A; 5 or less, go to 57, A

A	$12 = 6 \times 2$	$12 = 2 \times 6$	$2 \times 6 = 12$	$6 \times 2 = 12$	$12 \div 2 = 6$	$12 \div 6 = 2$	$12 \div 2 = 6$
	$6 \times 3 = 18$	$6 \times 3 = 18$	$18 \div 6 = 3$	$18 \div 3 = 6$	$5 \times 3 = 15$	$3 \times 5 = 15$	$15 \div 3 = 5$
	$15 \div 5 = 3$	$15 \div 3 = 5$	$15 \div 5 = 3$	$5 \times 5 = 25$	$25 = 5 \times 5$	$25 \div 5 = 5$	$15 \div 5 = 3$
	$6 \times 2 = 12$	$12 \div 6 = 2$	$12 \div 2 = 6$	$6 \times 3 = 18$	$18 \div 6 = 3$	$18 \div 3 = 6$	$12 \div 6 = 2$
	$15 \div 3 = 5$	$25 \div 5 = 5$	$18 \div 3 = 6$	$12 \div 2 = 6$	$15 \div 5 = 3$	$18 \div 6 = 3$	$25 \div 5 = 5$

go to page 55, A

B	$24 \div 4 = 6$	$20 \div 5 = 4$	$36 \div 6 = 6$	$30 \div 5 = 6$	$30 \div 6 = 5$	$20 \div 4 = 5$	$24 \div 6 = 4$
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6 or 7 correct, go to page 55, C; 5 or less, go to C

C	$30 = 5 \times 6$	$30 = 6 \times 5$	$30 \div 6 = 5$	$30 \div 5 = 6$	$24 = 6 \times 4$	$24 \div 6 = 4$	$24 \div 4 = 6$
	$30 \div 6 = 5$	$30 \div 5 = 6$	$24 \div 6 = 4$	$24 \div 4 = 6$	$6 \times 6 = 36$	$36 = 6 \times 6$	$36 \div 6 = 6$
	$36 \div 6 = 6$	$5 \times 4 = 20$	$4 \times 5 = 20$	$5 \times 4 = 20$	$20 \div 4 = 5$	$20 \div 5 = 4$	$30 \div 5 = 6$
	$24 \div 6 = 4$	$30 \div 5 = 6$	$25 \div 5 = 5$	$30 \div 6 = 5$	$36 \div 6 = 6$	$24 \div 4 = 6$	$20 \div 4 = 5$
	$30 \div 6 = 5$	$20 \div 5 = 4$	$36 \div 6 = 6$	$24 \div 4 = 6$	$24 \div 6 = 4$	$20 \div 4 = 5$	$36 \div 6 = 6$
	$24 \div 4 = 6$	$36 \div 6 = 6$	$20 \div 4 = 5$	$30 \div 6 = 5$	$36 \div 6 = 6$	$24 \div 6 = 4$	$30 \div 5 = 6$

go to page 55, C

D	$11 + 1 = 12$	$8 + 6 = 14$	$10 + 7 = 17$	$11 + 2 = 13$	$12 + 1 = 13$	$11 + 4 = 15$	$13 + 3 = 16$
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6 or 7 correct, go to page 58, C; 5 or less, go to E

E	$11 + 1 = 12$	$12 + 1 = 13$	$8 + 6 = 14$	$8 + 6 = 14$	$11 + 2 = 13$	$8 + 6 = 14$	$11 + 2 = 13$
	$11 + 4 = 15$	$11 + 4 = 15$	$10 + 7 = 17$	$11 + 4 = 15$	$10 + 7 = 17$	$10 + 7 = 17$	$11 + 4 = 15$
	$11 + 2 = 13$	$8 + 6 = 14$	$13 + 3 = 16$	$13 + 3 = 16$	$11 + 4 = 15$	$13 + 3 = 16$	$10 + 7 = 17$
	$13 + 3 = 16$	$11 + 4 = 15$	$8 + 6 = 14$	$10 + 7 = 17$	$13 + 3 = 16$	$11 + 2 = 13$	$8 + 6 = 14$

go to page 58, A

A $12 + 1 = 13$ $10 + 7 = 17$ $11 + 1 = 12$ $11 + 4 = 15$ $8 + 6 = 14$ $11 + 2 = 13$ $13 + 3 = 16$
 6 or 7 correct, go to C; 5 or less, go to B

B $12 + 1 = 13$ $11 + 1 = 12$ $11 + 2 = 13$ $11 + 4 = 15$ $11 + 4 = 15$ $11 + 2 = 13$ $12 + 1 = 13$
 $10 + 7 = 17$ $10 + 7 = 17$ $13 + 3 = 16$ $13 + 3 = 16$ $10 + 7 = 17$ $13 + 3 = 16$ $10 + 7 = 17$
 $13 + 3 = 16$ $8 + 6 = 14$ $8 + 6 = 14$ $12 + 1 = 13$ $8 + 6 = 14$ $11 + 1 = 12$ $8 + 6 = 14$
 $11 + 2 = 13$ $11 + 2 = 13$ $11 + 4 = 15$ $8 + 6 = 14$ $13 + 3 = 16$ $10 + 7 = 17$ $11 + 2 = 13$
 $8 + 6 = 14$ $10 + 7 = 17$ $11 + 2 = 13$ $13 + 3 = 16$ $11 + 4 = 15$ $8 + 6 = 14$ $13 + 3 = 16$
 go to C

C $11 + 3 = 14$ $12 + 2 = 14$ $9 + 5 = 14$ $8 + 7 = 15$ $11 + 6 = 17$ $13 + 2 = 15$ $14 + 1 = 15$
 6 or 7 correct, go to E; 5 or less, go to D

D $12 + 2 = 14$ $12 + 2 = 14$ $11 + 3 = 14$ $11 + 6 = 17$ $11 + 3 = 14$ $11 + 6 = 17$ $11 + 6 = 17$
 $13 + 2 = 15$ $14 + 1 = 15$ $13 + 2 = 15$ $9 + 5 = 14$ $9 + 5 = 14$ $13 + 2 = 15$ $9 + 5 = 14$
 $11 + 6 = 17$ $9 + 5 = 14$ $12 + 2 = 14$ $8 + 7 = 15$ $8 + 7 = 15$ $12 + 2 = 14$ $8 + 7 = 15$
 $8 + 7 = 15$ $13 + 2 = 15$ $8 + 7 = 15$ $9 + 5 = 14$ $11 + 6 = 17$ $8 + 7 = 15$ $9 + 5 = 14$
 go to page 60, A

E $12 + 3 = 15$ $13 + 5 = 18$ $12 + 6 = 18$ $14 + 2 = 16$ $11 + 5 = 16$ $14 + 3 = 17$ $9 + 6 = 15$
 6 or 7 correct, go to page 59, A; 5 or less, go to F

F $14 + 2 = 16$ $14 + 3 = 17$ $14 + 3 = 17$ $14 + 2 = 16$ $13 + 5 = 18$ $14 + 2 = 16$ $13 + 5 = 18$
 $13 + 5 = 18$ $14 + 3 = 17$ $12 + 3 = 15$ $12 + 3 = 15$ $11 + 5 = 16$ $11 + 5 = 16$ $14 + 3 = 17$
 $11 + 5 = 16$ $9 + 6 = 15$ $9 + 6 = 15$ $11 + 5 = 16$ $9 + 6 = 15$ $13 + 5 = 18$ $9 + 6 = 15$
 $12 + 6 = 18$ $14 + 2 = 16$ $13 + 5 = 18$ $9 + 6 = 15$ $14 + 3 = 17$ $9 + 6 = 15$ $12 + 6 = 18$
 go to page 60, C

A $11 + 0 = 11$ $14 + 3 = 17$ $11 + 7 = 18$ $12 + 5 = 17$ $14 + 6 = 20$ $6 + 7 = 13$ $13 + 4 = 17$
 6 or 7 correct, go to C; 5 or less, go to B

B $1 + 0 = 1$ $6 + 0 = 6$ $11 + 0 = 11$ $12 + 0 = 12$ $12 + 5 = 17$ $12 + 5 = 17$ $6 + 7 = 13$
 $12 + 5 = 17$ $11 + 7 = 18$ $11 + 7 = 18$ $12 + 5 = 17$ $11 + 7 = 18$ $14 + 3 = 17$ $14 + 6 = 20$
 $14 + 3 = 17$ $14 + 3 = 17$ $14 + 6 = 20$ $13 + 4 = 17$ $13 + 4 = 17$ $14 + 6 = 20$ $13 + 4 = 17$
 $13 + 4 = 17$ $6 + 7 = 13$ $13 + 4 = 17$ $11 + 7 = 18$ $14 + 6 = 20$ $12 + 5 = 17$ $14 + 6 = 20$
 go to page 60, E

C $15 + 2 = 17$ $9 + 7 = 16$ $15 + 3 = 18$ $14 + 4 = 18$ $15 + 4 = 19$ $13 + 6 = 19$ $14 + 5 = 19$
 6 or 7 correct, go to E; 5 or less, go to D

D $14 + 4 = 18$ $14 + 4 = 18$ $15 + 2 = 17$ $14 + 4 = 18$ $15 + 2 = 17$ $14 + 5 = 19$ $14 + 5 = 19$
 $15 + 2 = 17$ $13 + 6 = 19$ $14 + 4 = 18$ $14 + 6 = 20$ $14 + 5 = 19$ $13 + 6 = 19$ $13 + 6 = 19$
 $15 + 3 = 18$ $15 + 3 = 18$ $15 + 4 = 19$ $15 + 3 = 18$ $15 + 4 = 19$ $9 + 7 = 16$ $9 + 7 = 16$
 $13 + 6 = 19$ $14 + 5 = 19$ $9 + 7 = 16$ $13 + 6 = 19$ $9 + 7 = 16$ $15 + 3 = 18$ $15 + 4 = 19$
 go to page 61, A

E Find the total of 6 and 7 13
 Find the total of $(2 \times 3) + 1$ 7
 Find the total of $(4 \times 3) + 2$ 14
 8 minus 6 = 2 9 minus 7 = 2
 Subtract 9 from 12 3 Subtract 7 from 11 4 Subtract 5 from 12 7
 Which number is 3 less than 10? 7
 Which number is 5 greater than 9? 14

What is the total of $3 + 2 + 4$? 9
 What is the total of $6 + 3 + 2$? 11
 What is the total of $7 + 0 + 4$? 11
 8 + 3 minus 4 = 7 13 minus 7 = 6
 Which number is 5 less than 11? 6
 Which number is 7 greater than 11? 18

go to page 61, C

A $12 + 2 = 14$ $11 + 6 = 17$ $13 + 2 = 15$ $11 + 3 = 14$ $9 + 5 = 14$ $14 + 1 = 15$ $8 + 7 = 15$
 6 or 7 correct, go to page 58, E; 5 or less, go to B

B $12 + 2 = 14$ $12 + 2 = 14$ $13 + 2 = 15$ $12 + 2 = 14$ $13 + 2 = 15$ $13 + 2 = 15$ $14 + 1 = 15$
 $11 + 6 = 17$ $11 + 6 = 17$ $11 + 3 = 14$ $11 + 6 = 17$ $11 + 3 = 14$ $11 + 3 = 14$ $11 + 6 = 17$
 $9 + 5 = 14$ $9 + 5 = 14$ $12 + 2 = 14$ $9 + 5 = 14$ $9 + 5 = 14$ $13 + 2 = 15$ $9 + 5 = 14$
 $8 + 7 = 15$ $8 + 7 = 15$ $8 + 7 = 15$ $11 + 6 = 17$ $8 + 7 = 15$ $9 + 5 = 14$ $8 + 7 = 15$
 $9 + 5 = 14$ $13 + 2 = 15$ $12 + 2 = 14$ $8 + 7 = 15$ $11 + 3 = 14$ $14 + 1 = 15$ $11 + 6 = 17$
 go to page 58, E

C $12 + 3 = 15$ $13 + 5 = 18$ $9 + 6 = 15$ $11 + 5 = 16$ $14 + 2 = 16$ $12 + 6 = 18$ $14 + 3 = 17$
 6 or 7 correct, go to page 59, A; 5 or less, go to D

D $14 + 2 = 16$ $12 + 3 = 15$ $12 + 3 = 15$ $13 + 5 = 18$ $12 + 3 = 15$ $13 + 5 = 18$ $11 + 7 = 18$
 $14 + 3 = 17$ $12 + 6 = 18$ $12 + 6 = 18$ $14 + 3 = 17$ $14 + 3 = 17$ $12 + 6 = 18$ $12 + 6 = 18$
 $14 + 2 = 16$ $12 + 3 = 15$ $9 + 6 = 15$ $9 + 6 = 15$ $13 + 5 = 18$ $9 + 6 = 15$ $9 + 6 = 15$
 $13 + 5 = 18$ $14 + 3 = 17$ $11 + 5 = 16$ $11 + 5 = 16$ $9 + 6 = 15$ $11 + 5 = 16$ $12 + 6 = 18$
 go to page 59, A

E $6 + 7 = 13$ $13 + 4 = 17$ $12 + 0 = 12$ $14 + 3 = 17$ $11 + 7 = 18$ $12 + 5 = 17$ $14 + 6 = 20$
 6 or 7 correct, go to page 59, C; 5 or less, go to F

F $13 + 4 = 17$ $13 + 4 = 17$ $14 + 3 = 17$ $14 + 6 = 20$ $14 + 6 = 20$ $14 + 3 = 17$ $14 + 6 = 20$
 $12 + 5 = 17$ $12 + 5 = 17$ $14 + 6 = 20$ $13 + 4 = 17$ $11 + 0 = 11$ $12 + 0 = 12$ $14 + 3 = 17$
 $11 + 7 = 18$ $11 + 7 = 18$ $12 + 5 = 17$ $11 + 7 = 18$ $14 + 3 = 17$ $14 + 6 = 20$ $8 + 0 = 8$
 $14 + 3 = 17$ $7 + 6 = 13$ $13 + 4 = 17$ $14 + 6 = 20$ $12 + 5 = 17$ $11 + 7 = 18$ $12 + 5 = 17$
 go to page 59, C

A $15 + 2 = 17$ $13 + 6 = 19$ $15 + 3 = 18$ $8 + 7 = 15$ $14 + 4 = 18$ $15 + 4 = 19$ $14 + 5 = 19$
 6 or 7 correct, go to page 59, E; 5 or less, go to B

B $14 + 4 = 18$ $14 + 4 = 18$ $15 + 3 = 18$ $14 + 5 = 19$ $14 + 5 = 19$ $13 + 6 = 19$ $13 + 6 = 19$
 $9 + 7 = 16$ $9 + 7 = 16$ $15 + 2 = 17$ $9 + 7 = 16$ $15 + 2 = 17$ $15 + 3 = 18$ $15 + 2 = 17$
 $15 + 3 = 18$ $15 + 3 = 18$ $13 + 6 = 19$ $13 + 6 = 19$ $14 + 4 = 18$ $14 + 4 = 18$ $13 + 6 = 19$
 $14 + 4 = 18$ $15 + 2 = 17$ $9 + 7 = 16$ $15 + 4 = 19$ $14 + 5 = 19$ $15 + 4 = 19$ $15 + 3 = 18$
 $15 + 4 = 19$ $13 + 6 = 19$ $15 + 2 = 17$ $14 + 4 = 18$ $15 + 3 = 18$ $9 + 7 = 16$ $14 + 5 = 19$
 $9 + 7 = 16$ $15 + 2 = 17$ $13 + 6 = 19$ $15 + 3 = 18$ $14 + 5 = 19$ $15 + 4 = 19$ $13 + 6 = 19$
 $15 + 2 = 17$ $8 + 7 = 15$ $14 + 5 = 19$ $15 + 4 = 19$ $14 + 4 = 18$ $13 + 6 = 19$ $15 + 3 = 18$
 go to page 59, E

C Speed practice:

$2 + 3 = 5$	$3 \times 2 = 6$	$4 \times 3 = 12$	$2 \times 4 = 8$	$2 + 4 = 6$	$7 - 2 = 5$	$5 - 3 = 2$
$7 - 4 = 3$	$7 - 3 = 4$	$3 + 5 = 8$	$4 + 7 = 11$	$12 \div 2 = 6$	$12 \div 3 = 4$	$16 \div 4 = 4$
$6 + 0 = 6$	$8 - 0 = 8$	$0 \times 4 = 0$	$0 \times 6 = 0$	$8 - 5 = 3$	$9 - 6 = 3$	$9 - 3 = 6$
$15 \div 5 = 3$	$20 \div 4 = 5$	$7 + 5 = 12$	$5 + 7 = 12$	$3 \times 3 = 9$	$2 \times 6 = 12$	$3 \times 4 = 12$
$9 - 5 = 4$	$9 - 4 = 5$	$10 - 3 = 7$	$18 \div 3 = 6$	$18 \div 6 = 3$	$24 \div 4 = 6$	$25 \div 5 = 5$
$8 + 3 = 11$	$3 + 8 = 11$	$4 + 7 = 11$	$9 - 2 = 7$	$10 - 6 = 4$	$6 + 7 = 13$	$11 - 4 = 7$
$12 \div 4 = 3$	$20 \div 5 = 4$	$3 \times 6 = 18$	$4 \times 4 = 16$	$4 \times 6 = 24$	$11 - 3 = 8$	$11 - 8 = 3$
$5 \times 3 = 15$	$5 \times 0 = 0$	$6 \times 0 = 0$	$8 + 0 = 8$	$7 - 0 = 7$	$7 - 7 = 0$	$6 \times 4 = 24$
$8 + 7 = 15$	$9 + 6 = 15$	$6 \times 5 = 30$	$24 \div 6 = 4$	$30 \div 5 = 6$	$12 - 4 = 8$	$12 - 8 = 4$
$12 - 3 = 9$	$6 \times 6 = 36$	$11 + 7 = 18$	$11 - 6 = 5$	$8 + 7 = 15$	$12 - 7 = 5$	$36 \div 6 = 6$
$20 \div 5 = 4$	$9 - 5 = 4$	$4 + 7 = 11$	$7 + 5 = 12$	$12 \div 4 = 3$	$16 \div 4 = 4$	$11 - 3 = 8$
$7 + 3 = 10$	$5 \times 3 = 15$	$36 \div 6 = 6$	$5 \times 6 = 30$	$6 \times 4 = 24$	$3 \times 6 = 18$	$8 + 3 = 11$

go to page 62, A

N.B. Pupils may improve speed by returning to unused sections at any opportunity during the next few weeks.

Work these sums as quickly and carefully as you can:

A

$3 + 1 = 4$	$4 + 3 = 7$	$2 + 0 = 2$	$4 + 4 = 8$	$0 + 5 = 5$	$3 + 5 = 8$	$7 + 3 = 10$
$4 + 5 = 9$	$5 + 6 = 11$	$6 + 7 = 13$	$8 + 5 = 13$	$9 + 7 = 16$	$10 + 4 = 14$	$11 + 3 = 14$
$8 + 6 = 14$	$9 + 7 = 16$	$10 + 6 = 16$	$11 + 7 = 18$	$12 + 3 = 15$	$13 + 5 = 18$	$14 + 6 = 20$

B

$1 - 1 = 0$	$3 - 2 = 1$	$4 - 4 = 0$	$5 - 3 = 2$	$6 - 4 = 2$	$6 - 0 = 6$	$8 - 8 = 0$
$5 - 0 = 5$	$6 - 3 = 3$	$8 - 5 = 3$	$9 - 4 = 5$	$7 - 6 = 1$	$9 - 7 = 2$	$12 - 4 = 8$
$10 - 8 = 2$	$11 - 4 = 7$	$12 - 7 = 5$	$10 - 6 = 4$	$12 - 3 = 9$	$11 - 8 = 3$	$12 - 9 = 3$

C

$2 \times 1 = 2$	$2 \times 2 = 4$	$2 \times 0 = 0$	$3 \times 3 = 9$	$2 \times 4 = 8$	$5 \times 2 = 10$	$3 \times 4 = 12$
$2 \times 6 = 12$	$4 \times 0 = 0$	$5 \times 1 = 5$	$3 \times 5 = 15$	$4 \times 4 = 16$	$4 \times 6 = 24$	$6 \times 3 = 18$
$4 \times 5 = 20$	$6 \times 2 = 12$	$3 \times 6 = 18$	$5 \times 5 = 25$	$6 \times 4 = 24$	$5 \times 6 = 30$	$6 \times 6 = 36$

D

$2 \div 2 = 1$	$3 \div 3 = 1$	$4 \div 2 = 2$	$6 \div 3 = 2$	$8 \div 4 = 2$	$9 \div 3 = 3$	$12 \div 6 = 2$
$10 \div 2 = 5$	$10 \div 5 = 2$	$12 \div 3 = 4$	$15 \div 5 = 3$	$12 \div 4 = 3$	$18 \div 3 = 6$	$16 \div 4 = 4$
$15 \div 3 = 5$	$20 \div 5 = 4$	$24 \div 6 = 4$	$18 \div 6 = 3$	$24 \div 4 = 6$	$30 \div 5 = 6$	$36 \div 6 = 6$

E

$4 + 0 = 4$	$2 + 3 = 5$	$6 \div 2 = 3$	$12 \div 2 = 6$	$2 \times 3 = 6$	$5 - 2 = 3$	$6 - 3 = 3$
$3 \times 4 = 12$	$2 \times 0 = 0$	$8 - 5 = 3$	$1 - 0 = 1$	$3 + 7 = 10$	$4 + 6 = 10$	$2 \times 6 = 12$
$7 - 4 = 3$	$6 + 7 = 13$	$3 \times 5 = 15$	$9 - 9 = 0$	$20 \div 5 = 4$	$4 \times 4 = 16$	$10 - 7 = 3$
$12 \div 6 = 2$	$3 \times 0 = 0$	$13 + 6 = 19$	$10 - 4 = 6$	$4 \times 3 = 12$	$25 \div 5 = 5$	$5 \times 3 = 15$
$11 + 7 = 18$	$18 \div 6 = 3$	$11 - 5 = 6$	$6 \times 3 = 18$	$14 + 5 = 19$	$30 \div 5 = 6$	$9 - 6 = 3$
$6 \times 4 = 24$	$12 - 8 = 4$	$4 \times 5 = 20$	$36 \div 6 = 6$	$12 - 7 = 5$	$6 \times 6 = 36$	$24 \div 6 = 4$

PROGRAMMED ARITHMETIC WORKBOOKS

One, two
and accompanying
answer books

